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ABSTRACT

The manual presents information on classroom activities designed for gifted elementary grade students. The activities are adaptable for either homogeneous or heterogeneous settings and allow for flexibility and open mindedness in programing. An introductory section discusses ways to differentiate the curriculum in content, process, and product. Activities are presented according to two basic themes--family and time. The lesson plans specify performance objectives and activity information. Labels accompanying activities in grades K-6 represent higher levels of thinking skills (analysis, synthesis, and evaluation) as outlined in B. Bloom's taxonomy. The final section presents lesson plans for family and time concepts applied to areas of communication arts, science, social studies, mathematics, and interdisciplinary subjects. (CL)

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GRADES K-6

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OFFICE OF CURRICULUM DEVELOPMENT AND SUPPORT
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REACHING THE GIFTED

EXPERIMENTAL

BOARD OF EDUCATION
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Experimental
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GRADES K–6

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Foreword

Reaching the Gifted: Grades K-6 is a sharing of successful classroom ideas and strategies from the field, with some additions and suggestions by specialists in the academic disciplines.

While provocative, stimulating activities are vital for all children, this bulletin was especially designed for gifted children who have a high capacity for acquiring knowledge, absorbing and retaining information, as well as a strong desire to investigate, identify problems and respond to challenges. The guide provides for these special characteristics of the gifted learner in either a homogeneous or heterogeneous setting, with an opportunity for growth and in-depth study. The lesson plans are models which illustrate how continuity in learning is achieved.

The manual emphasizes activities that require the higher level thinking skills of analysis, synthesis and evaluation, with provision for a variety of learning styles. There are opportunities for interviews and consultations with experts, use of outside resources, independent study, and first hand experiences wherever possible.

Charlotte Frank

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Executive Director
Division of Curriculum and
Instruction

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Introduction

Reaching gifted youngsters demands the same basic principles of good teaching required to stimulate and support learning for all children:

- appropriate content and structure
- opportunities for thinking on higher levels such as analysis, synthesis, and evaluation
- opportunities to manipulate materials, ideas, concepts, and structures
- experiences which encourage problem identification and solution finding

However, the application of these principles in reaching gifted students will result in a differentiated curriculum. Since gifted youngsters acquire knowledge more quickly, content will broaden to cover additional related topics; content will also deepen to provide more complex materials and in-depth learning. Greater emphasis and proportionally more time will be given to activities which demand higher levels of thought.

This approach for gifted students, however, does not mean that work at the knowledge and comprehension levels is unnecessary. Demonstration of basic knowledge and adequate comprehension of a topic are prerequisite to operating on the higher levels. Teachers of the gifted are also continually evaluating students' basic skills and interweaving systematic skill development within the curriculum, at the same time as they are infusing activities which demand higher level thinking skills.

The activities suggested in the book are divided by theme. They are:

> Family as the basic unifying force and
> Time because all areas of study are linked by their coexistence in time.

Any number of other themes might have been selected such as: the built environment, people and work, machines, how people order the environment (systems, patterns, space), urban living, and so on. They are all interdisciplinary in nature. The activities are arranged by grade level and subject matter within each theme. Be aware that the activities are integral parts of the development and/or culmination of planned lessons.

Some illustrative lessons are included. These are coded in the book.

The labels that accompany each activity in grades K-6 represent all the higher levels of thinking skills as outlined in Bloom's Taxonomy of Thinking Skills.[1] The activities in the "All Grades" section that follows the K-6 section are labeled according to Frank E. Williams[2] whose aims are to stimulate creativity, divergent and fluid thinking. A description of both systems will be found in the appendix.

The activities may be used in a regular classroom as an extension of the regular curriculum. They may be presented to the youngsters as independent task cards or study projects, as learning contracts, or at learning centers.

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[1] Benjamin Bloom, The Taxonomy of Educational Objectives - Cognitive Domain (New York: David McKay, 1956).

[2] Frank E. Williams, A Total Creativity Program for Individualizing and Humanizing the Learning Process (Buffalo, N.Y.: D.O.K. Publishers, Inc., 1980).

However you decide to use these activities, you must provide time to evaluate the products. Only then can you determine if the youngster is processing the information on the level the activity was written.

Example: The following activity was written for a gifted Kindergarten class.

(See Family: Mathematics)

Teaching Objectives: To build skills of graphing, analysis, and application.

Performance Objectives: Students will be able to graph and analyze food preferences of family members and plan a menu based on collected data.

Introduction (Background): Children listened to the story Cloudy with a Chance of Meatballs by Judi Barrett. A discussion about favorite foods followed.

Procedures:

- Take a survey of your family members' favorite foods.
- Graph the results on a bar graph.
- Design a dinner menu based on your findings.

Evaluation of product: The child should be able to use the data collected by including only preferred food in the dinner menu. (If the graph shows hamburger, french fries, and soda, and the child's menu presents pizza, hot dogs, and cake, he/she hasn't processed the information by analysis.)

The most exciting activities need a teacher who will motivate, inspire, and support the students. It is you, the teacher, who makes the difference. Research finds that teachers get from children what they seek. The teacher has the most significant influence on a learning environment. In a survey conducted by Joseph Renzulli[1] in 1968, teachers were ranked highest as the factor critical to the success of the gifted program. The teacher becomes the skill builder, the facilitator, the encourager when he/she

- -provides opportunities to use knowledge creatively
- -plans fewer memory activities and more divergent and evaluative activities
- -encourages spontaneous expression
- -provides an atmosphere of acceptance
- -asks provocative questions

Allow for open-mindedness and flexibility in programming for special youngsters in your room. Their gifts are your gifts as you share their experience of discovery and learning.

In 1976 Elizabeth Drews wrote that "the teacher's task is to inspire and release....The teachers who have the greatest appeal to the gifted are those who are themselves excited learners and communicate this feeling to their students."[2]

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[1] Joseph Renzulli, "Identifying key features in programs for the gifted," Exceptional Children. 35 (1968) 217-221.

[2] E.M. Drews, "Leading out and letting be," Today's Education, 65 (1976) 26-28.

How to Differentiate the Curriculum

Activities for the gifted and talented are differentiated in that the content is more complex and abstract, the process uses the higher level thinking skills (application, analysis, synthesis, and evaluation) and the product is more varied. The activities provide youngsters with opportunities to develop skills of creative thinking (fluency, flexibility, originality, and elaboration). An example of how to differentiate the curriculum in content, process, and product follows:

	CONTENT	PROCESS	PRODUCT
Regular Class	The second graders read Ira Sleeps Over by Bernard Walker or The Best Loved Doll by Rebecca Caudill and demonstrate understanding of the characters and relate the story to their own lives.	The students will: 1. read the story 2. discuss the role toys play in a child's life 3. write letters to friends asking for donations of toys for shut-ins 4. plan for distribution of toys	The students collect toys to distribute to a hospital.
Gifted Class	These second graders read The Velveteen Rabbit by Margery Williams or The Red Balloon by Albert Lamorisse and demonstrate understanding of the characters and relate the story to their own lives.	The students will: 1. read the story 2. discuss the role toys play in a child's life 3. research toys of different periods, especially the colonial age which is studied in the second grade 4. bring in pictures and ideas for making them	The class uses natural materials to create colonial toys which are sold with the proceeds earmarked for a local philanthropic organization such as The Fresh Air Fund. The children keep records of inventory, prices, sales, expenses, and profits.

Planning to Provide for the Gifted Learner

HOW?

1. Establish groups based on interests, needs, curricular topics.
2. Set up mentorships with peers, adults, older students.
3. Provide for independent study through contracts, mini-courses, learning packages, task cards. (Some sample task cards are provided on pages 196 to 206.)

WHEN?

1. In place of the regular class or group activity.
2. In addition to the regular class or group activity.
3. As an extension of the regular curriculum.

WHAT?

Regular Group	Gifted Group
Students report on inventions in the field of communications.	Students invent a new form of communication.
Students list the requirements for healthy plant life.	Students carry on an experiment where one factor has been removed. Results are recorded by picture or graph.

Theme: Family

Theme: **Family**

Mathematics Grade K

Performance Objectives The student will be able to:	**Activities**
Use concepts of hour and half-hour to schedule daily activities.	Plan a time schedule for your family members that is designed to care for the new family pet. *Synthesis*
Conduct a survey and present results in graphic form.	Survey and graph the food preferences of your family members. Based on your data, design a menu for a dinner party you are planning to give for your family. *Analysis/Synthesis*
Collect, sort, graph, and discuss quantitative relationships.	Compare by a graph the number of siblings (include age and sex) in several children's family units. What conclusions can you make, based on your graph? *Analysis*
Demonstrate understanding of characteristics of geometric shapes.	Classify blocks according to shape families: triangle, quadrilateral, pentagon, hexagon, heptagon, octagon, nonagon, decagon. *Application/Analysis*
Recognize some properties of rectangular, cylindrical, and spherical objects.	There are many objects that belong to the same shape family. Find pictures that belong in the shape family of the specific shape you have chosen such as rectangular: block, cookie box, picnic basket. *Application*
Recognize importance of numbers to real situations.	In your opinion, which is the most important number in your family? Justify your response, e.g., "June twenty-ninth is the day my parents met," "Four is the number of people in my family," "One hundred and twelve is the total of all birthdates in my family." *Evaluation*

Theme: **Family**

Performance Objectives

The student will be able to:

Clarify personal attitudes and values.

Analyze characters and situations in literature.

Express ideas clearly.

Formulate questions to collect data.

Communication Arts Grade K

Activities

Having read or listened to "My Inside Self" by Rachel Field, discuss your reaction to the author's suggestion that you have an inside self and an outside self. *Evaluation*

Explain how the animal family in the Babar series exhibits human behavior and emotions. * *Analysis*

Decide which member of your family you enjoy going out with most. Explain why. *Analysis*

Investigate if any of your family members ever followed in their parents' footsteps, e.g., teacher's child became a teacher. *Application*

*See the full development of this activity on p. 109.

Theme: **Family**

Performance Objectives

The student will be able to:

Generalize from experience.

Identify and develop evidence to support a conclusion.

Science Grade K

Activities

The twenty-first century family will probably have a family robot. List the jobs or roles it will assume. *Synthesis*

Identify and locate the different noises in your home. Determine who made the noise and why the noise was made. Discuss the noise level with your family and consider ways to eliminate or reduce noise in your home. *Analysis/Evaluation*

Performance Objectives	**Activities**
The student will be able to:	
	Observe the preferred colors in your home. Is there similarity among family members' preferences? Explain. *Application*
	Observe and record the garbage that your family generates in a day. Suggest ways to eliminate some of it; recycle it. *Synthesis*
Solve problems creatively.	Design a new and unique product that you can make from junk. *Synthesis*
Categorize and classify information.	On a chart, classify animals in terms of: their number of legs; the foods they eat; their habitat; their life span; their suitability for domestication. *Analysis*
	Examine the different textures in your home to identify contrasts like rough/smooth, soft/hard. *Analysis*
Make inferences from data collected through observation.	Observe an ant farm. Decide if the ants display any "human" characteristics or behavioral patterns. Discuss with your class. *Evaluation*

Theme: Family

Social Studies Grade K

Performance Objectives	**Activities**
The student will be able to:	
Recognize the multifaceted roles of a family member.	Make a model of your family tree after investigating maternal and paternal families. *Application*
	Design a hat for a member of your family that shows the various roles that person has in your family unit. *Synthesis*

Performance Objectives The student will be able to:	Activities
Discover objects associated with familiar people.	Create a memory collage from mementos you associate with a family member, e.g., Mom's shopping list, picture, doodle, lock of hair. *Synthesis*
Analyze characteristics of social units.	Decide in what ways a school or classroom is similar to and different from a family unit. *Analysis* Decide on one "gift" you would like to give your family. Explain your choice. *Evaluation*
Recognize the role played by parents in the education process.	Debate Resolved: Parents are a child's first teachers. *Evaluation*
Demonstrate awareness of similarities among people.	Consider the ways you are like children in other parts of the world. *Analysis*
Classify information.	Survey the books in your classroom that have a family theme. Classify these books. *Analysis* Examine leisure activities of members of your family. Classify these activities as active or spectator. *Application*
Differentiate family members' roles.	Consider the person in your family or extended family to whom you would go if 1. You needed 20¢ 2. You wanted a story read to you 3. You needed a roller skate fixed 4. You wanted to play Hide and Go Seek. *Analysis* What would your family come to you for? *Application* Categorize the various activities in which your family members engage, e.g., indoor or outdoor activities by location and time of day. *Analysis* Create a family contract describing what parents owe children and what children owe parents. *Synthesis*

Theme: **Family**

Mathematics Grade 1

Performance Objectives	Activities
The student will be able to:	
Experiment with nonstandard units of measure; graph data, and make inferences.	Use your hand span to measure a table top in your home. Record the number of spans. Repeat this activity with one parent (or both). Graph your results to discover whether there is a relationship between the size of your hand and the number of spans. *Analysis*
Discover metric measures used in food products.	Survey the food products in your home to determine which labels are listed metrically. *Application*
Keep statistical records, graph, and analyze data.	Record your weight and height gain, and those of a sibling, over a period of a year. Through interview and family records discover growth patterns of other family members when they were your age. *Application*
Conduct a statistical survey.	Conduct a shoelace-use survey in your house by counting the number of shoes with laces. Determine which family member has the most shoes with laces. *Application*
Solve problems using mathematical concepts.	Determine how you would cut your birthday cake to get the most slices. *Analysis*
Discover some common uses for odd and even numbers.	Identify places where you find members of the odd and even family of numbers, as on a calendar, parts of a body, telephone, and so on. *Application*
Use math computations to solve verbal problems and create original problems.	Compute how much you would earn in a week if you got 5¢ a day for doing the dishes and your family ate out on Sunday. Design your own problems with chores and payment scales. *Synthesis*

Performance Objectives The student will be able to:	**Activities**
Support opinions based on mathematical data.	Decide how much money is a fair allowance for a first-grader. *Evaluation*
Apply concepts of odd and even numbers.	- Find two odd numbers that add to ten. - Find two even numbers that add to ten. - Can you combine one even number and one odd number that add up to ten? Why or why not? - Can you identify three odd numbers which total 30? Why or why not? *Application*
Count members of a set; find sets with specific number of members.	Use the telephone directory to identify the number of families with the same surname as yours. Identify a surname that appears only once, another that is listed at least 20 times, and one that is listed more than 12 times. *Application*

Theme: Family

Communication Arts Grade I

Performance Objectives The student will be able to:	**Activities**
Develop critical thinking skills.	Individuals often band together to form a "family" because of a common purpose or goal. Following the reading of "The Bremen Town Musicians," determine what their common purpose was. *Analysis*
Elaborate on a theme.	Create an original story in which several animals have a common purpose. Dramatize your story. *Synthesis*
Make inferences regarding cause-and-effect relationships.	Many fairy tales portray parents and step-parents in a negative light. Rewrite one such fairy tale giving the parent/step-parent positive characteristics. *Synthesis*

Performance Objectives The student will be able to:	**Activities**
	Determine how such a change affects the plot. *Analysis*
	Consider the "Old Woman Who Lived in a Shoe." In an advice column such as "Dear Abby," list the things she could do to discipline her children or to entertain them constructively. *Synthesis*
Solve problems creatively.	Design a new home for the "Old Woman" based on her needs. *Synthesis*
Observe and describe change.	Observe a member of your family over a brief period of time to identify something new about him/her that you never saw before. Illustrate your findings. *Analysis*
Express selectivity in use of details.	Construct a "word portrait" of yourself by cutting out from newspapers and magazines appropriate words that describe the real you. (This may be done for any family member--and makes a nice gift for Mother's, Father's, Grandparent's Day.) *Analysis/ Application*
Make inferences from observations.	Develop nicknames for family members based on observed behavior. Share these with classmates. Use only positive or affectionately humorous words. *Synthesis*
Examine values, his/her own and those of others. Express feelings through role playing.	Tell an extraterrestrial the ten words you consider to be most important in describing what you need to survive and feel comfortable in your family, e.g., hugging, listening, communicating. Role play your recommendations. *Evaluation*

Theme: **Family**

Science Grade 1

Performance Objectives	Activities
The student will be able to:	
Observe, describe, and compare details.	After reading "Smells" by Christopher Morley, determine what smells you associate with members of your family. Chart and illustrate your ideas. *Analysis*
Observe and discuss change.	In time all people change. Gather family photographs that reflect changes, and create a pictorial timeline. *Application*
	Heat can cause chemical changes. Ooserve the preparation of a meal to determine how food changed from its raw to its cooked state. *Application*
Generalize from data.	Families live in different kinds of houses. Animals do the same. Choose an animal and research its home or habitat to determine why that home is suitable for that animal. Present your findings in a report. *Analysis/Application*
Use a variety of sources of information.	Sometimes an older family member has an unusual remedy for an illness like a cold or sore throat. Interview family members to discover unique remedies. Decide which is the best. Try to find why it works. Support your views. *Evaluation*
Classify information.	Examine tools and household utensils to determine what simple machine is involved. Classify them according to their use, e.g., cutting tools, tightening tools, driving tools. *Analysis*
Apply information.	Some families are vegetarian. Consider changes that would have to be made to accommodate new or different eating styles. Plan a week's menu if such a change were to occur. Remember to balance your meals and to accommodate ethnic variables. *Synthesis*

Theme: **Family**

Performance Objectives

The student will be able to:

Collect data.

Develop deeper understanding.

Draw conclusions from data collected through observation.

Social Studies Grade I

Activities

Investigate the occupations held by your family members. Make a collage illustrating all the careers on your family tree. Write a paragraph describing one of the occupations held by a family member which you would most like to follow. *Application*

Design a "Helper's Contract" stating the plans you have for helping another family member. *Synthesis*

If you could "reach out and touch someone," decide who that person would be. Explain why.
Whom would you like to touch you? *Evaluation*

Observe products in your home. Interview a parent to determine how the media influenced buying. Examine the commercials she/he likes best. Create an original commercial to convince your parent to buy something you would like to own. *Synthesis*

Record the newspapers that come into your home. Observe which section each family member reads first. Collect data from classmates and create a histogram to illustrate the most popular and the least popular sections. *Analysis*

Design an ideal gift for each member of your family. Explain reasons for each gift. *Synthesis*

Theme: **Family**

Mathematics Grade 2

The student will be able to:

Performance Objectives	Activities
Construct and interpret graphs.	Record the different names by which your classmates call their mothers. Graph your data to determine the most popular name, like Mommy, Mom, Ma, Mum. *Analysis*
Support suggestions for changes based on graphed data.	Graph your family members' favorite TV programs. In a letter to a TV station, use the information to support your suggestions for a new show. *Synthesis/ Evaluation* After interviewing your family members, construct a pie graph to show how the family income is spent. Use fractions to represent each portion. *Analysis/Application* Compare a variety of pie graph constructions to determine whether people provide for their basic needs and wants with different priorities. *Evaluation*
Experiment with spatial relationships.	After returning from a shopping trip with your parent, determine how many items fit into each bag. Hypothesize about a way to repack the same items using fewer bags.* *Analysis*

*See the full development of this activity on p. 120.

Performance Objectives

The student will be able to:

Identify math patterns.

Activities

After taking a family walk to a familiar location, design a route which requires:
crossing fewer streets or
crossing twice as many streets.

After taking a family walk during which the number of steps each family member took was counted, compare and contrast each family member's steps. Determine if there is a relationship between the size of the individual and the number of steps taken. *Analysis/Synthesis*

Illustrate on a chart how addition and multiplication are related. This also can be done with subtraction and division. *Application*

Experiment with the variety and number of coins your parent might use to give you a 25¢ allowance. *Application*

Theme: Family

Communication Arts Grade 2

Performance Objectives

The student will be able to:

Identify sensory images.

Activities

In Shoes That Danced and Other Poems by Anna H. Branch, Ms. Branch writes of her mother's beautiful voice. Identify the language which creates sensory images. *Analysis*

Write a poem expressing what you like best about a family member. *Synthesis/Evaluation*

Performance Objectives The student will be able to:	**Activities**
Develop metaphors to create figurative language.	Discuss the couplet "Oh, how can a family be a tree?/I'm not a trunk, just look at me!" Consider what other things a family might be. (For instance, compare it to a train with its cars linked, a garden full of flowers, etc.) *Synthesis*
Express selectivity in using details.	Design an advertisement for an ideal set of parents, stating three qualities you want them to have. *Synthesis*
Recognize cause-and-effect relationships.	Predict the consequences of your parents' exchanging their tasks and responsibilities for one day. *Synthesis*
	Compare and contrast your favorite TV family with your own. *Analysis*
Construct rhyming patterns to express ideas.	Create an original Mother Goose rhyme about your family modelled on an actual one, e.g., "Old Mother Hubbard went to the cupboard" can become "Old Grandpa Tom caused us great alarm," etc. *Synthesis*
Collect data through listening skills.	Families often develop personal expressions and phrases for private communication. Listen to the conversations in your home to discover examples of expressions, e.g., "Too heavy to carry but too good to drop". *Application*
Support opinions convincingly.	Create a dialogue between you and a parent in which you defend your position to keep the puppy that followed you home. *Evaluation*
	In a discussion, evaluate ways in which family relationships are portrayed on TV. *Evaluation*

Theme: **Family**

Science Grade 2

Performance Objectives The student will be able to:	Activities
Organize data in appropriate ways.	Chart the various kinds of homes in which members of the animal kingdom live. In an oral presentation, discuss how each habitat is uniquely suited for its owner, e.g., spider - web squirrel - tree *Analysis/Evaluation*
	Compare the way the members of three different animal families move. Determine how each family's form of locomotion is suited to its life style. Decide which of the three most suits your style. *Analysis/Evaluation*
Recognize that all living things adapt to their environment.	Select one animal or plant to discover how it has adapted to its particular environment. Consider ways your family has adapted to its environment. *Application/Analysis*
Classify information.	Using pictures of foods your family eats, classify them by the part of the food that is eaten; e.g., leaf root stems fruit seed spinach carrots rhubarb apple peas lettuce turnips celery orange nuts *Application*
Observe accurately.	After reading "Digging Up Dinosaurs" by Aliki, report how fossils are found and reconstructed for display in a museum. Reconstruct the skeleton of a chicken for a class museum. *Application*
Conduct reliable experiments	Given the necessary materials and equipment, experiment and devise ways to light a bulb, make the buzzer sound.State how this information can be used in the home. *Analysis*

Performance Objectives

The student will be able to:

Use reliable sources of information.

Classify and categorize information.

Theme: **Family**

Performance Objectives

The student will be able to:

Make critical judgments.

Observe changes.

Observe personal characteristics.

Activities

After reading "The Planets in Our Solar System" by Franklyn M. Branley, construct a model representing the comparative size of planets and their distance from the sun. *Application*

Collect several kinds of leaves. Classify them by their shape, outline, texture, color, and fragrance. Identify through research the family group to which they belong. *Application*

Social Studies Grade 2

Activities

Family members have to make decisions that affect the family unit.
Determine what factors should be considered in the selection of a family pet.
Consider how the selection might be different if the family lived somewhere else. *Analysis/Synthesis*

Chart the home chores done by your family members. Is there a fair distribution of labor in your home? *Evaluation*

Investigate the changes that have occurred in your family over the last year. What changes would you like to make now? *Application/Synthesis*

Decide which of your family members is strongest, funniest, most observant, etc. *Evaluation*

Performance Objectives	**Activities**
The student will be able to:	
Compare details.	Compare several families who live in your neighborhood to determine similarities and differences. *Analysis*
Experience importance of cooperation in group action.	Write an editorial for your school newspaper on the topic of who should make a family's rules. Imagine what would happen if your family didn't have any rules. *Evaluation/Synthesis*
Utilize creative thinking skills.	Go through the necessary steps to create a holiday for sisters to add to Mother's Day, Father's Day, Grandparent's Day, and Brotherhood Week. *Synthesis*
	Create an ideal home for your family. *Synthesis*
Gather information through interview.	Families of immigrants often settle near each other for a variety of reasons. Interview a newly arrived immigrant to discover the advantages or disadvantages of living with fellow immigrants. *Analysis*
Make recommendations based on inferences.	After reading "City Mouse, Country Mouse," recommend a place for your family to live. Justify your choice. *Evaluation*
	After reading about our first president, George Washington, predict how your life would be different if the "father of our country" were your father. *Synthesis*

Performance Objectives	Activities
The student will be able to:	
Solve problems using math computations.	Assign each letter of the alphabet a numerical value, e.g., A = 1, B = 2, C = 3. Using this code system, determine which family member has the most valuable name (or least valuable, odd-numbered, etc.). Determine which family pet names would have a number value between 40 and 50. *Application*
Discover everyday uses for numbers.	Investigate and record the ways numbers are a part of your family's daily life, e.g., address, telephone, license plate, social security. *Application*
Develop original nonstandard measurement procedures.	In the family of shapes, circular objects suggest measurement problems. Investigate the different things that might be used to measure a ball. *Analysis/Synthesis*
Experiment with the concept of volume.	Determine the ways you can rearrange your furniture to make more sleeping room. Estimate the maximum number of people you can accommodate for a weekend visit. *Analysis/Synthesis*
Classify items by standard units of measure.	Classify things used in your home by whether you can measure them in terms of length (bed), etc. *Application*
Collect, organize, graph, discuss, and make inferences from data collected.	Obtain data on the size of your family for as many generations as there is information. Graph your family size for each generation and then compare the different-sized families. Suggest possible explanations for the observed variations. *Analysis/Synthesis*

Performance Objectives The student will be able to:	**Activities**
Make judgments about given data based on external criteria.	Record and graph time you spend with each family member individually, and with the family as a whole. Based on your findings, assess ways to increase meaningful and worthwhile time spent with your family. *Evaluation*

Theme: **Family**

Communication Arts Grade 3

Performance Objectives The student will be able to:	**Activities**
Analyze characters and situations in literature.	In the All-of-a-Kind-Family series by Sidney Taylor, the girls do not have plans for careers. Consider the talents shown by each character and provide career counseling by suggesting career alternatives. How would your suggestions differ if you were making them for careers today? *Synthesis* Predict how Goldilocks' visit to the Three Bears would be different if the family unit were changed, e.g., numerous cubs, single parent, extended family. *Synthesis*
Identify the setting in a particular story.	After reading The Little House on the Prairie by Laura Wilders, identify details in the story which indicate the time and place in which the story is set. Give several examples. *Analysis*
Present creative ideas.	Video games have changed the manner in which American families use leisure time. Invent a game that families will play in the future and design an advertisement for your game. *Synthesis*

Performance Objectives

The student will be able to:

Recognize that language is constantly evolving.

Defend the validity of different points of view.

Collect and evaluate information.

Establish credibility through reasoning.

Theme: Family

Performance Objectives

The student will be able to:

Apply generalizations.

Activities

Changing roles have brought about changes in career titles and job descriptions, e.g., stewardess became flight attendant, fireman became firefighter. Rename as many jobs as you can to make them more representative of both sexes. *Application/Synthesis*

Write an autobiographical anecdote. Rewrite the anecdote as seen by one of your family members. *Analysis/Synthesis*

More mothers are in the work force today than ever before.
Examine the lives of friends whose mothers work and friends whose mothers fill the traditional role, and assess the differences that exist.
Present your findings to the class. *Analysis/Evaluation*

Debate
Resolved: Third grade students should be allowed by their parents to do homework without help.
Evaluation

Science Grade 3

Activities

Human beings belong to the family of mammals. Prepare a collection of human characteristics and show by example similarities in the animal kingdom, e.g., gerbil parents prepare the nest together. *Analysis*

Performance Objectives	**Activities**
The student will be able to:	
	In some animal families the mother leaves her babies after birth. Investigate and report on methods of survival of these animals. *Application*
Recognize the unique character of the individual.	After reading "The Twins" by Elias Lieberman observe and interview your family members to identify physical and personality characteristics. List physical and personality characteristics which show how you are similar to and different from others in your family. *Application*
Formulate and test a hypothesis.	Create an environment for a family of plants (cacti, ferns, fungi). Modify one variable of the environment (soil, sun, water, etc.,) and predict the outcome. Verify your prediction and diagram your results. *Analysis/Synthesis/Evaluation*
Gather data.	Collect information about the kinds of fuels used in your home and community *Application*
Analyze mechanical operations.	After taking the proper precautions, examine a household appliance to discover how it works. Prepare an illustrated chart for presentation to the class. *Analysis*
	Suggest improvements for the appliance. *Synthesis*
Express scientific knowledge creatively.	Design a game in which magnetic attraction plays an important part. *Synthesis*
	Consider the three mechanical devices you will take with you on a family trip to the moon. Explain. *Evaluation*

Performance Objectives The student will be able to:	**Activities**
Utilize research skills.	Before written language developed, people found ways to communicate with other members of their tribe or family. Research "talking sticks" and "pictograms." Write a message to a family member using pictogram writing. *Synthesis*
Recognize ways in which people respond and adapt to natural conditions and develop cultural patterns.	Despite different customs and traditions, human beings are more alike than they are different. On a chart, demonstrate roles of family members in three different cultures, outlining the similarities that you believe exist. *Analysis*
	In the U.S. today, we tend to live in nuclear families. In other cultures extended families are the pattern. Select one of these cultures and evaluate the benefits to a child growing up among many relatives as compared to the benefits you receive in a nuclear family. *Evaluation*
	Evaluate the statement "Children should be seen and not heard," considering your own status within your family. *Evaluation*
Employ skills of problem solving.	Create a new ethnic group for the U.S. Describe what are its foods, customs, traditions, and language. Determine where in the U.S. you would want them to settle. Recommend a plan to integrate this group into American life. *Synthesis*
Make inferences based on research.	Among the Bushmen of the Kalahari, girls get married at about nine years old. Hypothesize about changes that might occur in this isolated culture once interaction with the outside world has occurred. *Synthesis*

Performance Objectives The student will be able to:	**Activities**
	On a kibbutz in Israel children are separated from their parents and raised by professionals in "Children's Houses." Analyze the advantages and disadvantages of this method of child rearing. *Analysis*
Solve problems creatively.	Scotland's clans each have a representative plaid. Research the background of one and create a family plaid of your own. *Synthesis*
	Design a unique home for your family that is more energy efficient and lets you cope better with problems of pollution and lack of safety. *Synthesis*
Compare and contrast past and present technology.	Compare some of the means of transportation today (air, sea, land) with those of 50 years ago. Include in your comparison structure of vehicles, maximum speed, and fuel consumption. *Analysis*
Observe and record details.	Describe how you would have traveled from New York City to Paris 75 years ago; describe how you would travel today. *Application*
Present conclusions based on evaluations of materials.	Pretend you are traveling by train from New York City to Washington D.C. in 1900. How many hours will it take you to complete your journey? What railroad improvements have been made to decrease your travel time today? Keep a diary of everything you see and do and everyone you encounter on your journey in 1900. *Synthesis*

Theme: **Family**

Mathematics Grade 4

Performance Objectives The student will be able to:	**Activities**
Apply concepts of measurement of area, proportions, and scale.	Given a basic area for a one-story house 30 feet by 60 feet, design a floor plan for your family. Draw the room to scale on graph paper. *Application* Make a scale drawing for the floor of your bedroom. Using your drawing, estimate the distance from one corner to the opposite corner. Check your estimate by a more direct method. *Application*
Apply concepts of proportion and ratio.	Collect several interesting recipes and rewrite them to suit the number of people in your family, e.g., change a recipe that serves four to one that serves six. *Application*
Apply computation skills to real situations.	Examine newspaper ads and "go shopping" to plan a week's menu for your family, considering nutrition and economics. Record the daily cost and the total cost for the food. *Analysis/Evaluation*
Collect and organize data and evaluate.	Comparison shop by examining ads from different supermarkets to determine where you can get the "best buys." Make your shopping recommendations to the class using comparative data in an oral presentation. *Evaluation*
Apply math skills to daily situations.	Over a weekend, identify at least five family situations presenting problems that required mathematical solutions, like the cost of going to the movies. Record the mathematics involved in problem-solving, for instance, $3.50 x 2 adult tickets + $2.00 x 3 children = total cost; change from $20.00 = ? *Application*

Performance Objectives The student will be able to:	Activities
Discover and create number patterns.	Number patterns show relationships. Find a pattern for these: 17, 34, 41, __, __, __, __. 3, 6, 5, 10, 9, 18, __, __, __, __. Create your own one-, two-, and three-step number patterns. *Analysis/Synthesis* Find at least two patterns for 2, 3, 5, 8, -, -. *Analysis*

Theme: Family

Communication Arts Grade 4

Performance Objectives The student will be able to:	Activities
Express thoughts concisely and with precision of language.	After reading Ginger Pye by Eleanor Estes report on how younger members of the family relate to the older members. Write an editorial for your class or school newspaper on the role you think senior citizens should hold in our society. *Evaluation*
Identify and analyze the relationship of fictional characters to real people.	After reading a book of your choice, with the family as a theme, compare your family to the characters in the book for time, setting, family values, and structure. *Analysis*
Examine how the events in a person's life affect character development.	Throughout history, famous families have emerged whose members have distinguished themselves in a particular field like politics, music, or literature. After researching a famous family, e.g., Adams, Roosevelt, Bach, Bronte, Wyeth, discuss in a report what you believe to be the contributing factors for this family's success. *Evaluation*

Performance Objectives The student will be able to:	**Activities**
Present ideas clearly and creatively.	Investigate family crests and historic coats of arms. Design an appropriate crest and coat of arms for your family considering the surname, interests, occupations, talents. Create a family motto. *Synthesis*
Recognize relationships between words.	Examine word families to discover relationships and chart your classifications. E.g., part--whole: trunk--elephant; planet--solar system structure--function: teeth--chew; lever--pry *Analysis*
Make effective use of descriptive adjectives.	Describe each member of your family by creating an adjective acrostic, e.g., Sweet Amiable Lively Lovable Youngest *Application*
Demonstrate an understanding of situations and feelings.	Write a script that tells what each family member says in reaction to your report card. Cast and dramatize your script. *Synthesis*
Develop an effective use of language to support your opinion.	Debate Resolved: A child should get an allowance by earning it. *Evaluation*

Theme: **Family**

Performance Objectives

The student will be able to:

Formulate a hypothesis.

Classify information.

Collect and sequence information.

Make inferences from data collected.

Science Grade 4

Activities

Investigate the planets of the solar system family to determine if there is a relationship between the size of a planet and the number of moons it has. *Analysis*

Consider the ways plants and animals depend upon one another. Focus on one plant or animal and diagram all the ways it is linked, either as a feeder or as food source, to other plants and animals. Predict what effect a break in this food chain would have on the entire chain. *Analysis/Synthesis*

Chart the similarities and differences among the following families of vertebrates: fish; amphibians; reptiles; birds; mammals.
Consider: habitat; heart chambers; body covering, etc. *Analysis*

Research an animal family and compare the care of the young to that of child care in a human family. Chart, on a timeline, the age at which each is capable of performing tasks independent of parent help, e.g., feeding, walking. *Application*

Define the statement "Necessity is the mother of invention." Give examples of historic events which motivated the creation of important inventions. Predict what inventions might come out of current situations or conditions. *Analysis/Synthesis*

Debate

Resolved: It would be beneficial for people to be able to control weather over large areas of the world. *Evaluation*

Theme: Family

Performance Objectives

The student will be able to:

Observe, describe, and compare details.

Recognize cause-and-effect relationships.

Weigh facts and attempt an adequate appraisal of them.

Develop logical patterns of problem solving.

Social Studies Grade 4

Activities

The Indians are a prime example of stereotyping. Compare the different family and life styles of native Americans to refute the stereotyped image. *Application*

After reading about the Pilgrims, compare and contrast your family's (or a fictional family's) motivation and experiences in coming to this country. Consider: reasons for coming, mode of transportation, hardships involved. *Analysis*

Trace the routes, on a small map, your ancestors took to get to this country. Include dates where possible. *Application*

Determine the changes that would occur in your family life as a result of moving your family to another time in history.* *Synthesis*

After reading about life in colonial America, write a diary entry telling about a day in the life of a colonial child; include chores, education, leisure activities. *Synthesis*

Research historic situations in which family members have been separated, like slavery, holocaust, and immigration. Examine the causes. *Analysis*

The United States, and New York City in particular, have been called the melting pot. New arrivals to the country were expected to blend in with everyone else. Today there is greater stress on retaining one's culture and ethnicity.

Debate

Resolved: The melting pot concept of assimilation fosters community spirit. *Evaluation*

Dwellings of the future may differ from those of today due to environmental problems or new forms of environment. Design a dwelling for a family for the year 2082 for land, sea, or space. *Synthesis*

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*See the full development of this activity on p. 133.

Theme: **Family** — Mathematics Grade 5

Performance Objectives	Activities
The student will be able to:	
Use mathematics skills creatively.	Families often have favorite games like chess, Monopoly, and ping pong. Graph preferences. Design a board game, using math facts, that your family will enjoy playing. *Synthesis*
Construct and interpret graphs; recognize the appropriate number operations needed to solve word problems.	Compare on a graph the price per unit of family size products to regular, king, economy, super, etc., to determine the best value for your money. *Analysis/Evaluation*
Analyze the components of an activity and present them in sequential order. Consider alternatives and their consequences.	Diagram a family chore on a flow chart. Examine the steps to determine at what points decisions are made. Predict the consequences if there were a change of direction in the flow. *Analysis*
Apply mathematics to real situations.	Use travel brochures to plan a family vacation. Calculate the cost of transportation, meals, lodging, and other related expenses. Consider family interests when planning. *Analysis/Application*
Gather, organize, analyze, and explain data.	Consult a bibliography to read a book about the life and contributions of a famous mathematician. Report your findings to the class. *Application*
	Identify a family/school problem. Gather and classify data to support your position in suggesting a solution. For instance: Problem: Children do not drink milk at lunchtime. Data: Record statistical observations: three out of seven throw milk out. Graph results of related surveys on beverage preference. Recommend alternative beverages, considering nutritional value. *Analysis/Synthesis*

Theme: **Family**

Communication Arts Grade 5

Performance Objectives	Activities
The student will be able to:	
Compare and contrast authors' literary styles.	Read books with a family theme written by two different authors. Compare and contrast in outline form how the authors deal with aspects of family life. *Analysis*
Analyze how character is revealed through a person's actions or speech.	After reading The Forgotten Door by Alexander Key, evaluate family life as portrayed by the Beans. In your opinion, can any people "progress beyond the need for laws"? *Evaluation*
Achieve deeper insight into one's own attitudes and behaviors as well as others'.	The Forgotten Door addresses the issue of values. List, in priority order, the ten things you value most. Explain your responses. *Evaluation*
	Compare and contrast the poems "I Love You For What You Are" by Carl Sandburg with "Mother To Son" by Langston Hughes to determine the mother's role in each poem. *Analysis*
Research and evaluate the individual's responsibility to other members of society.	After reading the Hughes poem "Mother To Son" write the best advice your mother has ever given you. Consider what advice you would give your mother if you had the opportunity. Role play the conversation. *Synthesis/Evaluation*
	Survey a number of classmates to formulate a hypothesis about the relationship between the size of the family and the sense of responsibility of each member. Research famous families to gather data to support or refute your hypothesis. *Analysis/Evaluation*

Performance Objectives	**Activities**
The student will be able to:	
Recognize the interrelationship of many words in the English language.	Etymology is the study of word families. Analyze the following sets of words to determine their relationships: a) monograph, monosaccharide, monogram, monotone, monopoly b) pandemic, pantomime, pan-American c) autograph, automobile, autobiography, automatic. Add other word families to this list. *Analysis/Synthesis*
Recognize the value of family relationships.	Choose one of your family members and write about how your life and the lives of others would be different if that family member had never been born. *Synthesis*
Apply power of observation in gathering facts for the purpose of drawing conclusions.	Visit the home of someone you have never visited before. Use your powers of observation to gather as much specific information as possible. Relate this to a Sherlock Holmes story for powers of observation. Record your observations and use your data to make inferences about the lifestyle of the family, e.g., interests, hobbies, preferences, talents. Verify your assumptions by interviewing a household member. *Analysis/Evaluation*
Seek out and identify problems that exist in his/her life.	Given the statement that the concept of family may be extended to the school and community, identify situations and conditions that exist in your school or community that are in need of improvement. *Analysis*
Analyze problems by asking questions that will provide factual information.	Survey members of your school or community to gain background information about a problem you have identified. Choose the questions and respondents so that you gain differing points of view. *Analysis*
Apply skills of organization and analysis in creating an original plan	Design a school or community action project that will involve you and your classmates. Consider the plan, the details of implementation, the people needed to make it work, and possible problems. *Analysis*

Performance Objectives

The student will be able to:

Support opinions convincingly.

Make inferences from data collected through observation and research.

Activities

Recommend your plan in an oral presentation to the powers that be (real or imaginary). *Evaluation*

After viewing and researching paintings that depict family life, like

Romare Beardon's	"Carolina Sunrise"
Robert Feke's	"Isaac Royal and His Family"
Henry Koerner's	"My Parents"
Grandma Moses'	"Christmas at Home"
Norman Rockwell's	"Breaking Home Ties," "Homecoming G.I."

Report your findings in an oral presentation to the class. *Evaluation*

Theme: **Family**

Science Grade 5

Performance Objectives

The student will be able to:

Demonstrate awareness of and interest in the environment.

Consider the interrelatedness of the various sciences.

Activities

Research the effect the climate has on the ways the members of your family earn their living, e.g., gardener, taxi driver, firefighter. Present your findings in an oral report. *Application*

After listing all the home appliances that use electricity, discuss energy-saving measures you could employ. *Application/Analysis*

Design an energy-saving device as an alternative for something currently in use in your home. *Synthesis*

Design a system for classifying all the nonliving objects in your home. *Synthesis*

Performance Objectives The student will be able to:	**Activities**
Express scientific observations creatively.	After careful observation, rename a member of the plant family so that its name reflects its special characteristics or habitat, e.g., daisy becomes sunny side up.* *Synthesis*
	List all the plant names you can which already reflect their properties, e.g., buttercup, Venus fly trap. *Application*
Apply generalizations.	More and more modern families follow the roles played in the animal kingdom as more women become providers and workers. Investigate to discover how in some animal families the female of the species has been the hunter, protector, and provider. Consider in what ways you would like to see humans imitate the style of animal families. Defend your position. *Evaluation*
Understand the nature of sound-producing objects.	Choose one of the four families of musical instruments and list all of the members. Describe how each is used in the orchestra in terms of the kinds of musical effect and mood that can be achieved. You can also research instruments from other countries. *Application*
	Invent a musical instrument from a hypothetical fifth family (strings, percussion, brass, and woodwinds are the four). Write a fictional account of how this family evolved. *Synthesis*
Appreciate the international character of science.	Science spans time and country. Research the systems of planet movement as devised by at least two of the following to discover how theories changed: Aristarchus of Samos, Ptolemy, Nicolaus Copernicus, Tycho Brahe, Galileo Galilei, Johannes Kepler, Isaac Newton. *Application*

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*See the full development of this activity on p. 142.

Performance Objectives	Activities
The student will be able to:	
Use imagination to identify many subproblems suggested by problem situations.	Nathaniel Hawthorne wrote in The House of Seven Gables, "Once in every half-century, at longest, a family should be merged into the great obscure mass of humanity and forget all about its ancestors." Predict what problems might arise if, in fact, our family roots were forgotten. *Synthesis*
Develop a deeper level of understanding	Identify your various family roles, e.g., son/brother/nephew. Determine how your role changes from situation to situation. Decide which role you most prefer and explain why.* *Evaluation*
Collect and analyze data.	The American family has undergone significant changes. Research an American family living in the 1930s and compare it with one living in the 1980s. In a report state their similarities and differences. Analyze conditions which have affected the roles of the family members. *Analysis*
Seek and identify problems.	Because they disagree, poll members to determine areas of concern and suggest ways in which a compromise can be reached. *Synthesis*
Enhance personal growth.	Families reflect their cultures. Investigate your family culture and collect representative objects that symbolize traditions in your home. Explain the significance of each object. *Application*
Recognize cause-and-effect relationships.	Research one of the famous American families listed below to predict how the course of American history would have been different had the family not existed: Roosevelt, Jefferson, Kennedy, Lincoln *Synthesis/Evaluation*
	Trace the role of the "first lady" from Martha Washington to Nancy Reagan. Present the conclusions you have drawn in a dialogue between the first and last "first lady" you've researched. *Synthesis/Application*

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*See the full development of this activity on p. 148.

Theme: **Family**

Mathematics Grade 6

Performance Objectives	Activities
The student will be able to:	
Create a scale drawing; compute with metrics.	Design a family room in your "new house." Diagram to scale, giving exact measurements in metrics. Include all the furniture and accessories you would want. *Application/Synthesis*
Compute distances, express percentages.	Given a family traveling from Washington, D.C., to Moscow, use the scale of miles on a globe to analyze and compute the shortest distance. Identify the countries over which the plane would fly, and estimate the percent of the total flight that is over water. Perform similar calculations for flights to Cairo and Tokyo. *Analysis/Application*
Use data to make sensible predictions.	Research the average family size in 1900, 1920, 1940, 1960, and 1980. Examine the data to find a trend. Based on the trend, predict what the average family size will be in 2000.* *Analysis/Synthesis*
Gather, organize, analyze, and discuss data.	Research the lives of several famous people to determine their ordinal place in the family (first-born, second-born). Hypothesize about a correlation between family place and success. Support your conclusion with data. *Evaluation*
	Research the life and contributions of a famous mathematician. Report your findings to the class. *Application*
	Draw circles with radii 1", 2", 3". Use a string to find their circumferences. How do the measurements seem to compare? *Application/Analysis*
	Do the same for squares. How do the areas compare? Using graph paper estimate the areas of the circles. How do the areas seem to compare? *Application/Analysis*

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*See the full development of this activity on p. 158.

Performance Objectives The student will be able to:	**Activities**
	Using the financial page, choose a stock from the New York Stock Exchange. Calculate the number of shares you could purchase with $100. Record the daily fluctuations in your stock over a period of time (one month, three months, six months). Determine profit and loss in dollars and cents and percent of gain or loss. A variation would be to create a stock portfolio "investing" in several stocks. *Application*

Theme: **Family**

Communication Arts Grade 6

Performance Objectives The student will be able to:	**Activities**
Recognize how the author presents memories and feelings in the personal narrative.	After reading The Diary of a Young Girl by Anne Frank, describe her relationship with the members of her family. Compare your family relationships with Anne's family relationships. In an oral presentation, read passages that show how Anne worked out family problems. *Application*
Achieve deeper insight into attitudes and behaviors.	Devise a set of rules for your family members that you think they will all accept. Present your rules and record the responses of each member to each rule. Evaluate your rules based on these responses. *Evaluation*

Performance Objectives The student will be able to:	**Activities**
Demonstrate the understanding of the components of a folk tale by writing one	After reading several American folk tales, see how the structure may provide a pattern. Write a folk tale about a member of your family following the pattern you discovered. *Application*
Recognize that myths concern themselves with qualities that mirror human values.	Report on the myths of Phaeton and the Chariot of the Sun or that of Ceres and Persephone. Discuss father--son or mother--daughter relationships based on your reading of the myths. Relate either myth to your own parental relationships. *Analysis*
Recognize the ties of many words in the English language.	Most American families have their roots in other countries and so do a great number of our English words. Discover what languages your family's ancestors spoke and identify as many words as you can in the English language that were derived from these languages. *Application*
Develop an appreciation of etymology.	After examining the similarity of the words for mother in six languages, e.g., English mother Greek meter Latin mater Spanish madre French mere German Mutter identify and chart at least twenty other English words in a similar manner. *Application*
Demonstrate an understanding of the similarities that exist among all people.	Evaluate the following statement written by Carl Sandburg: "There is only one man in the world and his name is all men. There is only one woman in the world and her name is all women. There is only one child in the world and the child's name is all children." *Evaluation*

Performance Objectives

The student will be able to:

Demonstrate an understanding of the universal condition of mortals.

Recognize cause-and-effect relationships.

Establish credibility through facts, reasoning, and authority.

Recognize that many words have similar roots. Use a dictionary to determine origin.

Theme: Family

Performance Objectives

The student will be able to:

Generalize from data.

Activities

Hypothesize about the event or events, condition or conditions, to which Sandburg may have been referring when he made the earlier statement. *Analysis/Synthesis*

In an oral report, discuss the effect of the woman's right to vote on the American family.* *Evaluation*

Debate
Resolved: We should support the passage of the Equal Rights Amendment. *Evaluation*

Identify the different words in the English language that have been derived from the Latin word for mother (mater) and father (pater). *Analysis*

*See the full development of this activity on p. 154

Science Grade 6

Activities

Identify the variety of environmental pollutants in your community. Suggest ways to reduce or eliminate each of the pollutants identified. *Analysis/Synthesis*

Debate
Resolved: Requiring families to return empty bottles and cans, in order to have their deposit refunded, will significantly lower environmental pollution. *Evaluation*

Identify the sources of energy and report on how each is used by a family. Suggest ways for a family to make more efficient use of the energy used. *Application/Synthesis*

Performance Objectives

The student will be able to:

Identify evidence to support a conclusion.

Make inferences from data collected through observation.

Collect and research data to support a conclusion.

Activities

Survey your family members to collect data on the kinds of accidents common today compared to accidents common 100 years ago. Draw conclusions based on your information. Predict the kinds of accidents that might occur 100 years from now. *Analysis/Synthesis*

Debate

Resolved: Nuclear energy is a safe source of power. *Evaluation*

Families may attempt indoor climate control in a variety of ways. Investigate how they might regulate temperature; humidity; wind (draft). *Application*

A pond is often a home to many life forms. Examine firsthand the forms of life inhabiting the pond and diagram the inhabitants interdependence. *Analysis*

Compare and contrast the social structure and behavior of bees or ants with that of a human family. Use a chart to illustrate similarities to your own family. *Analysis*

Investigate Mendel's laws of heredity. Choose a trait such as eye color, hair texture, etc., and trace the possibilities for inheriting each of these traits in your personal or any imaginary family. *Application*

Theme: Family

Social Studies Grade 6

Performance Objectives

The student will be able to:

Experience the importance of cooperation in group efforts.

Activities

Louis S.B. Leakey and his family discovered bones and bone fragments belonging to hominids now called Zinjanthropus, Homo habilis, and Homo erectus. Consider if your entire family worked on digs, how would if affect your family life. For what particular archeological job would each family member be best suited? Present your answer in dialogue form. *Analysis/Synthesis*

Performance Objectives The student will be able to:	**Activities**
Collect, categorize, and analyze data.	You and your family take a "trip" to the isle of Crete. Conduct an archeological survey of the area and record your findings on a chart. List the name of the artifact, describe its use, analyze its importance to the culture. *Application*
Apply decoding skills.	On an Egyptian vacation you view hieroglyphics. Write a letter to your grandmother using this code. *Application*
Analyze data to draw conclusions.	In one cave in Switzerland the bones of 1000 cave bears have been found. Mingled with these are human bones of tribes or families as well as tools and ashes. Analyze this data to explain why we are certain it was the people who ate the bears and not the bears that ate the people. *Analysis*
Recognize the validity of conflicting viewpoints.	Create a goddess of volcanoes. This goddess is called before the family of Roman gods to defend herself against the accusation that she played a part in the destructin of Pompei. Plan a defense for her. Determine if she will win or lose, what, if any, the penalty will be, and if the family relationship of the gods affected the decision. *Analysis/Synthesis*
Seek alternatives before deciding on a solution to a problem.	Listen to each of the following songs: "Daddy Don't You Walk So Fast," Wayne Newton; "My Boy," Richard Harris; "You'd Better Set Down, Kids," Sonny Buono, to determine what common problem they depict. Determine how the father in each song is handling the problem. Which of the three is the best solution? *Evaluation*
	In an editorial for your class/school newspaper give your opinion about the role of music in making social statements. *Evaluation*
Achieve deeper understanding.	Determine in what ways a family tree is like the branches of our government. *Analysis/Evaluation*

Theme: **Family**

Performance Objectives

The student will be able to:

Generate multiple solutions.

Follow many directions of thought.

Mathematics All Grades

Activities

List all the ways you could use a computer in your home. *Fluency*

Consider three original ways your family can save money. *Originality*

Determine the least expensive and happiest way you can spend a day/evening with your family. *Elaboration*

Decide into how many "families" can we classify numbers, e.g., odd, even, ordinal, prime. *Flexibility*

List all the things found in your home that come in twos. *Fluency*

Imagine you are a number. What number are you? Explain. *Originality*

Determine in how many ways you can write 99 e.g., 100 minus 1, 49 + 50, 33 x 3). *Flexibility*

Using four "4"s, how many whole numbers can you name less than 100? For example, $\frac{44}{44} = 1$, $\frac{4}{4} + \frac{4}{4} = 2$, etc. *Flexibility*

Theme: **Family**

Performance Objectives

The student will be able to:

Determine the possible effects of a given situation.

Communication Arts All Grades

Activities

Decide, if you could change places with any member of your family, who it would be. Why? *Elaboration*

Performance Objectives	**Activities**
The student will be able to:	
	List as many different kinds of families as you can. *Fluency*
Produce a number of divergent responses.	Family members help each other. Create a list of all the kinds of help you can do without. *Originality*
	Imagine the thoughts that run through your grandparent's mind while sitting in the park, watching youngsters at play. * *Elaboration*
Develop a deeper level of understanding.	List rules that are good for all families. *Elaboration*
	Consider in what ways a mirror is like a family. *Elaboration*
Develop fluency of thought.	Within three minutes list all the words you associate with family. *Fluency*
Process cognitively emotional experiences.	List all the different ways you could say "I love you" to someone in your family. *Flexibility*
Clarify personal priorities.	Determine what would be the best thing that could happen to your family; the worst. *Originality*
	List all the things you wonder about. List things your mother wonders about; your father. *Fluency*

*See the full development of this activity on p. 138.

Theme: **Family**

Science All Grades

Performance Objectives	**Activities**
The student will be able to:	
Generate original ideas.	Invent an original method to keep Father Time from aging. *Originality*

Performance Objectives The student will be able to:	**Activities**
	Consider in what ways are a family and a recipe alike. *Elaboration*
	Imagine how the family would change if men gave birth instead of women. *Elaboration*
Generate multiple solutions.	Suggest a variety of ways you might plan an energy-saving vacation. *Flexibility*
	Write the formula for a happy family. *Originality*
Follow many directions of thought.	List ten things in your home that reflect light in the order of most reflective to least reflective. *Fluency*
	Consider how you would feel if you were the family car. *Originality*
	Consider in what ways many people can influence a) their own environment and b) their own extinction. *Elaboration*
Experience creative ability.	Determine which machine best describes your mother, father, brother, etc. *Originality*
	Imagine you are the perfectly good dialer on a broken telephone. To what uses could the family members put you? *Elaboration*
	Imagine you are an empty can left on a beach by a family. Describe your sensory experiences. *Elaboration*
	Pretend you are a seed planted by your mother. Trace your experiences from a seed to a blossoming flower. *Elaboration*

Theme: Family

Social Studies All Grades

Performance Objectives The student will be able to:	Activities
Produce original responses.	Illustrate your interpretation of the phrase "A family circle." *Originality*
Produce a variety of creative responses.	Consider in how many ways a community is like a family; unlike a family. *Flexibility*
Use creative thinking skills in an unusual way.	Combine the characteristics of two family members to come up with a unique third. what are the benefits of this combination? *Originality* Determine whose shoes in the family would be most difficult to fill. *Elaboration* Examine your family through the eyes of the TV set; a pet; a neighbor. *Originality* Hypothesize why some countries are referred to as Fatherland and others as Motherland. *Elaboration*
Seek and identify problems and offer creative solutions.	Create a special New York City dessert for a member of your family using landmarks as feature, e.g., Brooklyn Battery Tunnel Cakes Spumoni Island (Coney Island) Great White Wafer (Great White Way) *Elaboration/Originality* Identify conditions in your home that could be inproved and suggest methods for improvement. *Elaboration* List things your parents expect of you. Indicate for each whether you think the expectation is fair or unfair. Suggest methods for resolving your differences. *Elaboration* Consider all the different things you can tell about a family by walking through their house. *Fluency* List the ways in which you are like other members of your family. List the ways you are different. *Fluency*

SUGGESTED INDEPENDENT RESEARCH ACTIVITIES

Theme: Families

The Code of Hammurabi

The Code of Hammurabi may seem harsh and in some cases ridiculous to us, but at the time it was written it was a great step taken in the history of man. It was the first uniform set of laws to be followed by one great empire.

Read more about Hammurabi's code using different sources of information to become familiar with as many aspects of this code as possible.

1) In your research, find those laws which deal with family life. Write them down, think, then tell—

  a) how you think these people regarded the family
  b) about the structure of the family
  c) what each family member's role was
  d) which of these laws apply to family life today.

2) You are asked to set up a law code which is to be followed by families in your country. Write your code—a "just" code which applies to the "here and now."

The Family Coat of Arms

1) What was it? How, why and where did this originate/

2) Research and draw two Family Coats of Arms handed down from generation to generation. Present your, drawings to the class with a brief report on the families they represent.

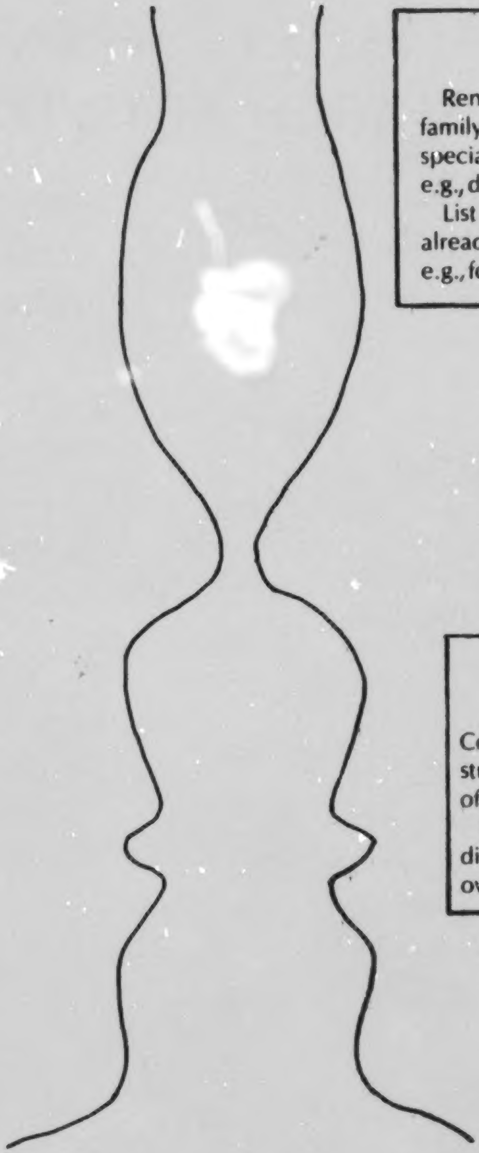
3) You are about to be granted the use of a Family Coat of Arms by your government. Design your newly granted coat of arms and explain its design to your classmates

Take
a closer
Look!

THE HUMAN FAMILY

At this center you can . . .

1. Discover how musical instruments create moods.
2. Rename a member of the plant family.
3. Compare and contrast the social structure of insect and human families.
4. Invent a musical instrument.
5. Design an energy saving device for your family.
6. Examine the changing role of women and men.
7. Observe and contrast male and female appearances in the animal kingdom.



Rename a Plant

Rename a member of the plant family so that its name reflects special characteristics or habitat, e.g., daisy sunny side up.

List all the plants you can which already reflect their properties, e.g., four leaf clover.

Energy Savers!

1. List all the home appliances that use electricity, heat, light, hydropower.
2. What energy saving measures could be used in your home?
3. Design an energy saving device as an alternative for something currently in use in your home.

Insects and Human Families

Compare and contrast the social structure of bees or ants with that of a human family.

Design a chart to show behavior differences and similarities to your own family.

Musical Instruments

Invent a musical instrument for a hypothetical fifth family (strings, percussion, brass, woodwind).

Write a fictional account of how this family evolved.

ALL IN THE FAMILY

Families Around the World

Human beings are more alike than different.

On a chart, demonstrate roles of family members in three different cultures, outlining the similarities that you feel exist.

At this center you can . . .

1. Compare the roles of family members in different cultures.
2. Analyze the advantages and disadvantages of raising children in a kibbutz.
3. Evaluate the behavior of children in America today.
4. Explore the impact of the "outside world" **on** "primitive" societies.
5. Examine the benefits of life in an extended family.
6. Create a new ethnic group.
7. Design a new home for your family.
8. Create a "plaid" for your family.

Home Sweet Home

You have been selected to design a home for your family that is more energy efficient and better suited to combat urban problems of pollution and safety. What unique design plans can you create?

Children!!

"Children should be seen and not heard" was a popular adage in the past. Some people believe today's children are outspoken and self-indulgent. Evaluate this statement and justify your position.

Theme: Time

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Theme: Time

Mathematics Grade K

Performance Objectives	Activities
The student will be able to:	
Differentiate between units of time.	Order, by illustration, the events in your day. *Application* Classify your daily events into those which occur before, during, and after school. *Analysis*
Recognize patterns of numbers which relate to time.	Using a digital clock, predict the times of day at which number patterns will appear, e.g., 11:11, 9:09, etc. *Synthesis*
Reflect, in an oral presentation, awareness of the importance of time.	Given the power to "stop the clock" at any hour justify your choice. *Evaluation/Synthesis*
Estimate time duration.	While someone holds a stopwatch tap your desk with a pencil to estimate one second, two seconds, one minute. *Application*

Theme: Time

Communication Arts Grade K

Performance Objectives	Activities
The student will be able to:	
Recognize vocabulary related to specific criteria.	Use a newspaper to find as many different time-related words as you can. *Application*
Demonstrate understanding of a story's sequence and the relationship between events.	Order a series of five to ten pictures to create a logically sequential story. *Analysis*

Performance Objectives	**Activities**
The student will be able to:	
	Create and illustrate a story then order the series of five to ten pictures to show the logical sequence of the story. *Synthesis*
	Create a story with an upper grade "buddy." Your buddy will write the story and you will illustrate it. Order the pictures to follow the story sequence. *Synthesis*
Recognize descriptive vocabulary in orally presented material.	After hearing "The Squirrel" or a similar action poem, identify words the poet uses to describe the action and the subject of the poem. Pantomime descriptive words or phrases as they are heard. *Analysis*
Demonstrate an understanding of literature through dramatization.	Interpret an action poem by role playing. *Application*
Evaluate prose and/or poetry through puppetry.	Design and create a puppet to retell a favorite story, fairy tale, rhyme. *Application/Synthesis*
Defend opinions convincingly.	Defend, in a discussion, your response to the question, "When is it time to grow up? *Evaluation*

Theme: **Time**

Science Grade K

Performance Objectives	**Activities**
The student will be able to:	
Gather and organize information.	Compare, on a chart, the gestation period for a chick, an elephant, a human baby. *Analysis*

Performance Objectives	**Activities**
The student will be able to:	
Use knowledge to predict outcomes.	Predict the melting times for an ice cube at room temperature and one in a refrigerator. Verify your predictions. *Analysis*
Arrive at conclusions supported by evidence.	Examine the advantages of pendulum and mechanical clocks. Defend your choice. *Analysis/Evaluation*
Engage in supposition.	Imagine how you would tell time if you were an animal like a fox, a robin, or a squirrel. *Synthesis*
Invent a new product.	Create a clock that does more than tell time. Illustrate or build a model of your invention. *Synthesis*

Theme: Time

Social Studies Grade K

The student will be able to:	
Develop creative problem solving skills.	Design a special clock for a community helper, e.g., auto mechanic, doctor, grocer. *Synthesis*
Observe and record details.	Record the locations of time-keeping devices in your community. Explain reasons why the items are placed in those locations. *Analysis*
Identify problems and suggest creative solutions.	Determine how you might identify the time of day if you didn't own a watch, the time of month or year if you didn't own a calendar. *Analysis*
Recognize cause-and-effect relationships.	Rewrite the events of a favorite story that begins with "Once upon a time" so that the outcome is different. *Synthesis*
	Hypothesize about the job the bellringer took when he was no longer needed to ring the church bells to tell the time. *Synthesis*

Performance Objectives

The student will be able to:

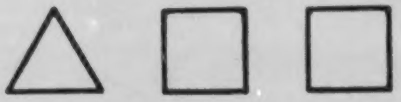
Experiment with introductory concepts of probability.

Activities

Estimate and record the number of times a coin will land heads up when tossed ten times, 20 times, 100 times. *Application*

Estimate and then tally how many marbles of a certain color will be drawn from a bag of equal numbers of marbles of a set number of colors, e.g., ten red marbles, ten blue marbles, ten yellow marbles, etc. *Application*

Play a game to obtain the greatest sum using random number selection.
- Prepare a sheet with the following frames:



- Make up five cards numbered one to five.
- Place the cards in a bag.
- The child draws a card from the bag and must record it on one of the frames. The number appearing on the card can be recorded either in the triangle or one of the squares. If the child chooses a square then he/she must record the number in both squares.
- The child then draws another card and records the number appearing on the card in the remaining frame or frames. (Depending on the child's initial choice there would be either the triangle or both squares remaining.)
- The numbers appearing in each frame are then added together to arrive at the total.
- The children should arrive at an awareness of the advantage of placing lower numbers in the triangle. *Evaluation*

Performance Objectives

The student will be able to:

Organize information, present it in graphic form, and analyze results.

Relate time to money and develop a scale which reflects this relationship.

Distinguish activities which are affected by the amount of time spent on them.

Activities

After recording your weekly schedule of activities, graph your data to determine which activities take the greatest or least amount of time. Use bar graph. *Analysis*

Develop a pay scale based on the amount of time it takes to do certain classroom jobs, e.g., distributing papers, washing chalkboards. *Synthesis*

Apply the proverb "haste makes waste" to an evaluation of activities which require a certain length of time to be done efficiently. Explain your response in terms of possible consequences. *Evaluation*

Theme: Time

Communication Arts Grade I

Performance Objectives

The student will be able to:

Create imagery through similes and metaphors based on time and color.

Activities

Create similes between colors and different times of the day. Explain your choices, e.g., as blue as three o'clock. *Synthesis*

Create metaphors between sounds and times of the year. Explain your choices, e.g., winter is a whisper. *Synthesis*

Performance Objectives	**Activities**
The student will be able to:	
Analyze relationships and develop creative thought.	After doing the above activities, infer how a change in setting would effect the relationships drawn, e.g., if you lived in the country, would three o'clock be blue or would winter whisper? *Analysis* After hearing Emily Dickinson's "Lightly Stepped a Yellow Star" hypothesize how your life would change if the night stopped being punctual and forgot to come. *Synthesis*
Analyze the relevance of a common expression in relation to one's own life.	After discussing the proverb, "Time waits for no man," keep a weekly record of your activities to determine which of them must be done promptly, e.g., getting to school, a show. *Analysis* Record the number and variety of ways you use time-related expressions within a week's time, to determine common usage, e.g., be on time; it's time to go. *Application/Analysis*
Propose creative ideas.	Create a "timely" joke for a special holiday. *Synthesis*
Evaluate literature to determine the soundness of events in a selection based on internal criteria.	After reading Aesop's fable "The Boy Who Cried Wolf" discuss the question: Should the townsfolk have believed the boy after he lied two times? *Evaluation*

Theme: Time

Science Grade 1

Performance Objectives	**Activities**
The student will be able to:	
Discover physical changes wrought by time.	Record observations of physical changes in the neighborhood, such as land erosion, sidewalk cracking, tree and plant growth.* *Application*

*See the full development of this activity on p. 111.

Performance Objectives The student will be able to:	**Activities**
Recognize that myths were created to explain natural phenomena.	Create a seasonal myth to explain the season's origin. Predict how a myth written in 1982 would differ from one written in 2082. *Synthesis*
Observe and record data.	Record, on a time line, the growth of a lima bean from planting to flowering. *Application*
Make inferences from observed evidence.	Hypothesize about the effect that a malfunction in the internal clock of certain animals might have on those animals, e.g., as affecting their hibernation, spawning, mating. *Synthesis*
Experiment with different variables before forming generalizations.	Investigate which stimuli in the environment might be substituted for an alarm clock. *Application*
Identify evidence to support a conclusion.	The Liguus is a snail which, at its fastest, moves no more than 25 feet in a 24-hour period. Investigate patterns of other molluscs and consider ways to increase the Liguus's speed. *Analysis/Synthesis*
	After investigating the gestation periods of several mammals and graphing data, analyze to determine if there is a relationship between animal size and development time inside the mother. *Analysis*
Solve problems creatively.	Create an incubator for an elephant or a mouse that needed more time to develop. *Synthesis*

Theme: Time

Social Studies Grade 1

Performance Objectives The student will be able to:	**Activities**
Identify problems in time management and determine alternatives.	Determine the ways you can save time traveling from home to school. Create a map to show the shortest route from your home to school. *Analysis/Synthesis*

Performance Objectives	**Activities**
The student will be able to:	
Make judgments about given events based on an internal criterion.	Evaluate the relevance of given holidays to today's society, and to you. Role play your reaction to the decision that Thanksgiving (or any other holiday) will no longer be celebrated. *Application/Synthesis* Create a holiday for an event which is not yet celebrated. Use newspapers and magazines as source material. Justify your suggestion in an oral presentation.* *Analysis/Synthesis/Evaluation*
Identify relationships between the past and present.	In Japan, September 15 is Old People's Day. Its purpose is to give recognition and respect to the aged. Interview the oldest person you know to determine the similarities and differences between his/her childhood and yours. *Analysis*
Recognize cause-and-effect relationships.	Investigate and record the important events that took place the year you were born. Predict some future consequence of one of those events. *Synthesis*
Determine point of view.	Role play a historic figure facing a current problem, e.g., Abraham Lincoln discussing the economic situation. *Synthesis*

***See the full development of this activity on p. 118.**

Theme: **Time**

Performance Objectives

The student will be able to:

Find alternative ways to record given information.

Analyze the efficiency of two time-telling devices.

Put daily events into justifiable sequence.

Recognize relationships between unrelated measurement devices.

Demonstrate an understanding of information imparted numismatically.

Theme: **Time**

Performance Objectives

The student will be able to:

Use figurative language to create imagery.

Make judgments about statements in a selection based on his/her beliefs.

Mathematics Grade 2

Activities

List all the different ways you could write today's date. *Application*

Construct a simple water clock and a sand clock. Investigate to determine which is more accurate. Record and analyze your results. *Application/ Analysis*

Rearrange the order of your day's activities and justify each change. How would your changes affect others? *Analysis/Synthesis/Evaluation*

Compare and contrast a clock and a compass. *Analysis*

Create as many different rhythms as you can using three quarter notes and one quarter rest. *Synthesis*

Predict what someone in the year 4082 could discover about our civilization by examining a penny. *Analysis*

Communication Arts Grade 2

Activities

Compose a poem in which a clock is personified. *Synthesis*

Evaluate the moral of "The Tortoise and the Hare." Why does "slow and steady" win the race? *Evaluation*

Performance Objectives	**Activities**
The student will be able to:	
Contrast points of view.	Compare the passage of time from the viewpoint of a student with that of a historian or scientist. *Analysis*
Develop cause and effect relationships.	Predict the consequences if you didn't do your homework on time; didn't go to sleep at an early hour; woke up too late to have breakfast. *Synthesis*
Formulate ideas through art.	Determine in what colors you would paint a happy time. What happy time would you paint? *Synthesis*
Recognize and react to poetic images.	After reading "Indian Children" by Annette Wynne, investigate the street games Indian children played and compare them with street games you play today. *Analysis*
	Invent a street game children will play in the year 2080. *Synthesis*
Understand cause and effect relationships.	Keep a diary for one week to determine how the events of one day affect the next. *Analysis*
Develop through dramatization cause-effect relationships and infer analagous ones.	Predict and dramatize the consequences of Paul Revere's ride occurring at midday instead of midnight. *Synthesis*
	Dramatize three other historical events, showing how the element of time might have altered the outcome. *Synthesis*

Theme: **Time**

Science Grade 2

Performance Objectives	Activities
The student will be able to:	
Identify main idea of scientific research and give supporting details.	After reading Tick Tock the Popcorn Clock by Jane B. Moncuse, demonstrate in a skit the effect of the change of seasons on corn. *Application*
	Demonstrate how the earth's rotation can act as a time-telling device. *Application*
	Illustrate on a chart the types of flowers you can tell time by. Construct a flower clock. *Application*
	Graph patterns of sleeping, waking, eating, etc., during a week to establish a body clock. Predict the consequences if something affected the clock's normal operation. *Analysis/Synthesis*
	Compare and contrast the metamorphosis of a butterfly and a frog to determine which undergoes the most dramatic changes within the shortest time period. *Analysis*
Seek out and identify problems that exist in preserving other life forms.	Some sequoia trees have lived 4,000 years. These giant trees are protected by law and cannot be cut down. Present, in a speech, your reasons for suggesting a law to protect another example of flora or fauna. *Evaluation*
Make inferences from data collected through investigation.	Dinosaurs became extinct 65 million years ago, but some believe that a species may still be living in Scotland's Loch Ness. Investigate sitings of the monster. Create your own explanation to solve the mystery of "Nessy." *Synthesis*

Performance Objectives The student will be able to:	**Activities**
Achieve deeper insight into his/her own attitudes.	Defend your choice of living in a city that has four seasons. *Evaluation*
Increase creative production.	Invent an addition to a time instrument which will enable it to have an additional use. *Synthesis*

Theme: Time — Social Studies Grade 2

Performance Objectives The student will be able to:	**Activities**
Infer importance of information sources.	Analyze New York City's seal to uncover clues to the past. *Analysis*
Use symbols to communicate ideas.	Design a new seal to teach future civilizations about life in New York City today. *Synthesis*
Extend learning activities into reality.	Given one day to show tourists the sights of the Big Apple, plan an itinerary of places to visit and the best time to visit each attraction. Explain why. *Application*
Use research skills to locate and evaluate information.	In 1939 a time capsule was buried at the site of the World's Fair in New York City. It contained objects representative of the 1930s' American culture. After investigating a decade of your choice, select five items to be placed in that period's time capsule. *Analysis*
Elaborate on ideas.	Given the opportunity to go in a time machine, choose a trip back to the known past or forward to an unknown future. Justify your choice. *Evaluation*

Performance Objectives The student will be able to:	**Activities**
	After reading the poem "Instant Everything" by Jane W. Krows, debate the advantages of using the original or the instant. *Evaluation*
	Predict in what ways your life would be different if each week had two Saturdays. *Synthesis*
Research and sequence data.	Record, on a time line, the history of transportation from the steam engine to the SST Concorde. *Application*
Analyze problems and apply possible solutions.	Invent a way to improve transportation in New York City to accommodate handicapped people. *Synthesis*

Performance Objectives The student will be able to:	Activities
Develop a sense of time units by experiencing them.	List all the activities you think you could do within three minutes. Using an eggtimer time yourself as you complete the activities. What conclusions can you draw? *Application*
Explain that probability is the expected fraction of times some specific event will occur over a long period of time with many trials.	Predict how many times a chosen number from one to six will appear in 30 rolls of a single die. Compare your prediction with experimentation. *Application* If 50 thumbtacks are tossed (or one 50 times), how many will show stems pointing up? down? What feature of the thumbtack might be a factor in more stems down? Do the experiment, if possible, with thumbtacks having short stems and long stems.* *Evaluation*
Gather and analyze statistical data.	Graph the frequency of letters in your name and the names of ten friends. What correlations can you make with the values of letters in a Scrabble game? *Analysis* Survey the older members of your family to determine the period they consider "olden days." *Application* Graph your results. Do you see a pattern? Analyze the relationship between the age of the respondent and his/her answer. *Analysis* Suggest the number of cars (or trucks) that pass by each minute for a period of five consecutive minutes (or longer time intervals). Do this at different times of the day. *Application*

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*See the full development of this activity on p. 126.

Theme: **Time**

Communication Arts Grade 3

Performance Objectives The student will be able to:	Activities
Identify personal attitudes and behaviors.	Apply representative quotes from Bartlett's Dictionary of Quotations to real life situations, e.g., A stitch in time saves nine. Explain how that quote applies to something in your experience. *Application*
Compare and contrast data.	Survey people representing different generations regarding their use of leisure time as children. Compare the data to your own recreational activities. *Analysis* Using Brcughel's painting Children's Games infer which games are universal. *Analysis*
Create character descriptions from given specifications.	Given the hours of the day and night, write a character description for each hour. How would the personality of 11 A.M. differ from that of 11 P.M.? *Synthesis*
Express original ideas according to a prescribed form.	Create a recipe (using the correct form) for a perfectly wonderful day. *Synthesis* Elaborate on this idea by writing a recipe for any other division of time. *Synthesis*
Formulate and defend a point of view.	A state legislative committee has been organized to explore the possibilities of using school buildings during the entire year. Some children would attend school in the summer as one of the four terms. Criticize or defend this proposal in a speech before the committee. *Evaluation*
Recognize the emotional impact of particular vocabulary.	Identify the "time" words in a familiar poem or story, e.g., "Stopping by Woods on a Snowy Evening" by Robert Frost and predict the effect on the mood of the poem if these words were changed. *Synthesis*

Performance Objectives

The student will be able to:

Recognize that in literature relationships can be logically inferred from directly stated items.

Activities

Given the expression "Time heals all wounds," select a book, story, incident that supports or refutes this statement. Consider:

1. Which situations and interactions helped the characters recover emotionally or physically?
2. Which problems prevented other characters from facing life successfully?
3. How important a component is personality?

Analysis/Evaluation

Theme: Time

Science Grade 3

Performance Objectives

The student will be able to:

Use imagination in applying scientific principles.

Extend learning activities into the real world.

Activities

Based on a historical study of the recording of the passage of time from sunrise to sunset, construct a time-telling device. *Application*

A large tower clock in the city hall of Stamford, Connecticut, occasionally stops operating because a huge flock of starlings jam the mechanism by roosting on the hands. The clock is kept out of service until the birds fly away. Given this problem, redesign the clock's hands to discourage roosting birds. *Synthesis*

A "talking clock" provides the blind with the time. Invent a timepiece for someone with a handicapping condition or special need. *Synthesis*

Performance Objectives The student will be able to:	**Activities**
Draw conclusions related to given evidence.	As one ages, the reaction time slows down. Today's life span averages 75 years. That span is increasing. Predict the kinds of problems that might be encountered as a result of slower reaction time, e.g., driving, moving out of the path of danger. *Analysis/Synthesis*
Seek and identify creative solutions to problems.	The United States falls into four time zones. Assess the pros and cons of this situation for a Standard Zone business man who is an avid tennis player and who has major financial transactions with the West Coast region that does not use Daylight Saving Time. *Analysis*
Observe, compare, and describe details.	Experiment growing seeds from morning glories and four o'clocks. Observe and record their developmental patterns to make a comparison. *Synthesis*

Theme: Time

Social Studies Grade 3

Performance Objectives The student will be able to:	**Activities**
Recognize and evaluate conflicting viewpoints.	Time and technology caught up to the Yanomanos of Amazonia in the last few years. Now Brazil is considering the construction of a highway through the rain forest. Assess the situation through the eyes of an American anthropologist, a Brazilian banana grower, and a Yanomano headman. *Analysis/Evaluation*

Performance Objectives The student will be able to:	**Activities**
	As technology advances, some jobs that were once essential become obsolete, and new careers appear. Identify modern jobs/careers that did not exist in 1882, and predict what new careers may be available when you are ready to enter the job market. *Application/Synthesis*
Define need for cooperation in groups.	Given the need for people to form communities, predict human organizations that will be necessary for survival in the Space Age. *Synthesis*
Compare and contrast past and present. Present conclusions based on evaluation of materials.	Early inhabitants characterized past times by reference to natural phenomena, e.g., the time of the big snow, the time of the shaking earth. Outline last year with weather divisions instead of calendar designations. Identify a significant national or international news event that occurred during that period. *Analysis/ Synthesis*
Demonstrate creative thinking skills.	The continents have changed their shape during the milleniums and there has been speculation about a lost continent. Recommend a number of uses if such a mass of land suddenly emerged out of the ocean. *Synthesis/ Evaluation*
Recognize cause-and-effect relationships.	Analyze, on a chart, the changes in interior and exterior design of homes used by different desert people over the last three centuries. Investigate to determine the event which precipitated the changes in design. *Analysis*

Theme: **Time**

Performance Objectives

The student will be able to:

Use time measurements as evaluative tools.

Explore frequency and patterns.

Recognize the changes that occur in the "geometry" of a clock face.

Demonstrate proficiency in planning with time as a consideration.

Theme: **Time**

Performance Objectives

The student will be able to:

Defend a point of view.

Mathematics Grade 4

Activities

Debate the advantages of using a "24-hour clock" (military time) or write an editorial for your class/school newspaper citing the advantages of a military time. *Evaluation*

Illustrate in a flow chart your day's activities. Evaluate your use of time. *Application*

Time several different children in an activity, e.g., number of sit-ups in two minutes in the morning and afternoon. Graph your results and based on an analysis of the data, determine the best time of day to hold a class Olympics. *Analysis*

Determine the fractional number of times the numeral "3" appears in a book. Use one page of an almanac. Verify your prediction. *Analysis*

Predict how many different angles are created by the hands of a clock in an hour's time. Classify obtuse, acute, and right angles. *Analysis*

Plan an itinerary for your trip "Around the World in 80 Days." Consider timetables, travel distances. Plot the route on a map. *Analysis/Synthesis*

Communication Arts Grade 4

Activities

Plan a speech in support of a new national holiday you have originated.
Design a symbol and festivities to augment your presentation. *Synthesis/Evaluation*

Performance Objectives **The student will be able to:**	**Activities**
Examine how the details of an author's life may affect his/her writing.	After reading biographical information and representative writing, infer the relationship between the author's life and his/her work (e.g., Introducing Charles Dickens by Mary. L. Becker, and A Christmas Carol, Cricket on the Hearth). *Analysis*
Use selectivity in presenting a character description.	Create an adjective time-line using colorful and descriptive words to tell about you at different periods of time. Divide the time-line into two-year periods, e.g.: Birth 2 4 6 8 10 cuddly funny cute playful chubby mischievous *Analysis/Synthesis*
Recognize that time is often a subject and component of poetry.	Collect poems for an anthology of poetry with time as a theme. *Application* Create original poems, using all the senses, to express an aspect of time: day, night, spring, forever. *Synthesis*
Discover the role time plays in speech and writing. Achieve greater precision in speech.	Compare time-related words, e.g., soon, forever, hour, never, day, and cite examples where a change in a word would effect a significant change in context. Refer to common expressions and literary passages. *Synthesis*
Analyze and evaluate how time influences story, character, and plot.	Read several short stories in which the time period is significant to the plot and create a description for a character who could be in one story. *Analysis/Synthesis/Evaluation*

Theme: Time

Science Grade 4

Performance Objectives The student will be able to:	**Activities**
Identify and sequence information.	Record, on a time line, the development of time-telling devices. *Application*
Develop supporting details and present information convincingly.	Present, in a discussion, the advantages and disadvantages of each device. *Analysis*
	Create your own time-tellng device, and evaluate its advantages and disadvantages. *Synthesis*
Observe, categorize, and classify information, developing conclusions related to given evidence obtained through experimentation.	Experiment with mold formation to determine the significance of time as a factor in this process. *Analysis*
Make inferences from data collected through observation.	Electric consumption is measured in kilowatt hours. Observe and record your family's use of electricity. Recommend ways to decrease the number of kilowatt hours in your home. *Application/Analysis*
	Investigate to discover if there is an alternative source that would give greater energy over longer periods of time at less cost. *Application*
Observe, describe, and compare details.	Record the phases of the moon over a period of several months. Use the observed data to devise a lunar calendar. *Synthesis*
Recognize cause-and-effect relationships.	Investigate the origin of one of the many natural phenomena which occur with regularity over long periods of time, like Halley's comet, seven-year locust, solar eclipse. *Application*

Theme: **Time**

Social Studies Grade 4

Performance Objectives	Activities
The student will be able to:	
Examine related but different experiences for similarities and differences.	Compare the experiences of an explorer of the "New World" with those of a modern astronaut. *Analysis*
Elaborate on a given event.	Create a dialogue to explain what took place just prior to, and immediately following, a significant historical event. *Synthesis*
Symbolize a historical event.	After examining modern political cartoons, create an original cartoon to illustrate a situation in our country's history. *Synthesis*
Recognize cause and effect relationships.	Choose a historical event and predict what the consequences would be if the event had not happened. *Analysis/Synthesis*
Identify bias. Represent different points of view based on historical and current knowledge.	Interchange prominent figures from two different time periods and create a dialogue between them. E.g., Susan Anthony meets Gloria Steinem; Charles Darwin meets Rev. Jerry Falwell. *Synthesis*
Develop methods of inquiry and research.	It took many years for women to gain the right to vote. Today they hold many jobs once thought of as "man's work." Contrast the kinds of jobs women had 25 years ago with those they hold today. Predict what jobs they might have in 25 years from now. * *Application/Synthesis*
Demonstrate decision making skills through persuasion.	Write an editorial for your school/class newspaper about the song you'd like to see named as our new national anthem. Support your opinion convincingly. *Evaluation*

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*See the full development of this activity on p. 133.

Theme: Time

Mathematics Grade 5

Performance Objectives	Activities
The student will be able to:	
Analyze the calendar as a system of measuring and recording the passage of time.	After investigating three proposed calendars--the thirteen-month calendar, the world calendar, and the perpetual calendar--construct a chart illustrating the pros and cons of each. Make your recommendations for adoption and justify your choice. *Analysis/ Evaluation*
Weigh advantages of altering time-related rules.	Investigate the time constraints inherent in sports events (e.g., the two-minute warning, half-time) and predict effects on the game if these times were lengthened or shortened. *Synthesis*
Appreciate importance of setting time limits.	Design several activities for your classmates which are challenging but possible to do within a given period of time. *Synthesis* Time limits on tests. Budgeting time for each test-item. Strategy for using time optimally. *Analysis/Synthesis*
Explore unconventional alternatives for measuring and recording time.	Based on your knowledge of metrics, devise a clock and a calendar with the pattern of tens. *Analysis/ Application* Design a new clock and calendar based on a unit of your choice. *Synthesis* Write an editorial for your class/school newspaper in which you defend your choice. *Synthesis/Evaluation*
Recognize patterns in musical notation. Investigate relationship of time signature to music.	Music time is called tempo. Investigate relationship between time signature and musical patterns by listening to representative selections, e.g., waltz, march. *Analysis*

Performance Objectives The student will be able to:	Activities
Apply knowledge of time.	Change a musical composition of your choice to make its tempo more contemporary. Rewrite the time signature. *Synthesis*

Theme: **Time**

Communication Arts Grade 5

Performance Objectives The student will be able to:	Activities
Use literature to evaluate the relevancy of reoccurring issues.	After reading the opening passage from A Tale of Two Cities, "It was the best of times, it was the worst of times...," identify a different period of time which represents those qualities and justify your choice. *Evaluation* List all the reasons why this line applies today and suggest a plan for making this "the best of times." Analysis, *Synthesis*
Recognize that literary works reflect the social issues of the times.	Good books reflect important issues of the times. Read one of the following to identify the significant issues: Drums by James Boyd Caddie Woodlawn by Carol Brink Flight to Freedom by Henrietta Buchmaster Johnny Tremain by Esther Forbes *Analysis*

Performance Objectives	**Activities**
The student will be able to:	
Interpret figurative language artistically	Illustrate familiar figurative expressions involving time in a literal way, e.g., "time and tide wait for no man," "overtime," "killing time," "passing time," "time-out". *Application*
Predict consequences of actions.	A curfew sets a limit on time. Some foreign countries employ curfews to control the population's actions. Predict the possible consequences of a curfew in New York City. Determine the relationship between consequences. *Analysis/Synthesis*
Understand how word sequencing affects the meaning of a sentence.	Rewrite or reorder given sentences to change the meaning of the "time" word. (E.g., "Last Friday I went for a walk with my dog." "Friday, I went for a last walk with my dog." "Friday, I went for a walk with my last dog.") *Analysis*
Identify and analyze subtle cause-effect relationships.	Some people are said to be "ahead of their time." Investigate the life of one of the following to determine whether this phrase is appropriate: Copernicus Isadora Duncan Vincent Van Gogh Benjamin Franklin Charles Darwin Leonardo da Vinci Jules Verne *Analysis/Synthesis/Evaluation*
Defend point of view.	Your state legislature is about to vote on using daylight-saving time. Assess your position on this issue. Identify a classmate with an opposing viewpoint and plan a debate. Present it to the class. *Evaluation*

Theme: **Time**

Science Grade 5

Performance Objectives The student will be able to:	**Activities**
Develop a conclusion related to evidence collected through observation and experimentation.	Construct a water clock substituting a variety of liquids to determine how viscosity affects the accuracy of the device. Determine the adjustments to be made in the structure if you could no longer use water. *Analysis/Synthesis*
Make inferences from data collected through observation.	The length of time which a person lives is called his/her life span. On a visit to an old cemetery, like that of the Trinity Church in Manhattan, record data to help make inferences about past life spans, causes of death, health conditions, epidemics, etc. *Analysis/ Evaluation*
Recognize cause-and-effect relationships.	Natural rhythms, timed to the cycle of day and night, are called circadian rhythms. Discover examples of natural time cycles and and predict the consequences if this biological time were interrupted, e.g., sleep of humans, pattern of nocturnal animals. *Application*
Gather and organize information.	Investigate the uses for a Sky Map which presents the different appearance of stars and planets throughout the year. *Application*
Integrate scientific knowledge with personal narrative writing.	Imagine you are a time-related object, e.g., clockface, second hand, calendar date. Create a skit and role play your experiences with special consideration to your sensory images. *Synthesis*

Performance Objectives	**Activities**
The student will be able to:	
Identify and develop evidence to support a conclusion.	Over long periods of time some prehistoric organisms became extinct. Their remains provide paleontologists with clues to the past and allow them to infer the reasons for the extinction. Using your imagination make up an animal that does not exist anymore. Why didn't the species survive? *Synthesis*
Extend learning activities into today's world.	Choose a contemporary animal whose life is threatened by extinction. Research and examine the contributing factors, and make your recommendations in a letter to the National Association for the Preservation of Endangered Species that will ensure the animal's future survival. *Evaluation*
Make predictions based on given data.	Inventions have improved over a period of time. On a chart, compare how an invention of your choice looked originally to the way it looks today. Predict, with specific modifications, how it will look in the future. *Application/Synthesis*
Recognize mutual interaction of science and society.	In 1939 the New York World's Fair was dedicated to "The World of Tomorrow." Plan and design three new inventions to be displayed at next year's fair with the same theme. *Synthesis*
Develop personal criteria.	You have three minutes to pack before blasting off for colonization on the moon. List and describe what you are packing and tell why each item is needed. Speculate about how your list might differ if you were leaving for Saturn. *Synthesis*

Theme: **Time**

Social Studies Grade 5

Performance Objectives The student will be able to:	Activities
Demonstrate the relevance of history through comparison.	History is the study of past times and historiography a study of the study of history. Examine two different versions of the same historical event to compare the interpretation, and accounts of for example, the Civil War. Use American history textbooks from different states, or from the same state published at different periods of time or compare accounts of the American Revolution by reading: Making of a Nation by Merrill Jensen and The American Revolution Through British Eyes by Martin Kallusch and Andrew MacLeish. * *Analysis*
Recognize historical trends as they impact on the future.	To put the events of modern time into perspective so that we may make predictions for the future, we must study the past. Examine historical trends to determine how and why technological innovations occurred in the areas of communication, transportation, industrialization, national defense, and education. *Application*
Locate reference materials and increase research skills.	Research the life of a person who, in your opinion, has affected the course of history for all time; e.g., Gandhi Abraham Lincoln Thomas Jefferson Martin Luther King Jr. Lenin Defend the statement "Leadership affects history." *Evaluation* Record, on a time line, the important events which represent each year of your life. *Analysis*

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*See the full development of this activity on p. 130.

Performance Objectives

The student will be able to:

Identify and explore the relationships of the individual to the community.

Activities

Giving some of your time to help the community strengthens the community and yourself. List all the ways you, a fifth-grader, could volunteer your time and talent to participate in community affairs. *Application*

Evaluate each of the following community activities to which you would consider devoting your time. Justify your priorities. Work as a:
a) Candystriper b) voter registration drive member c) nursing home aide d) local political party headquarters aide e) museum or historical society aide. *Evaluation*

Performance Objectives

The student will be able to:

Calculate large numbers and convert measures of time.

Analyze data and provide appropriate criteria.

Demonstrate understanding of the intricacies of a time-keeping device.

Recognize the need to develop time management skills.

Apply mathematical skills to complex problems.

Activities

Use a chart of the Julian period to determine the number of days since your birth and then answer:

Have you lived one million seconds?
Have you lived one million minutes?

List anyone or anything you know that has been alive one million minutes. *Application*

On a chart, compare and contrast two of the following calendars:

Muslim	Gregorian
Julian	Hebrew

Determine which is best suited for modern America. Justify in a debate. *Analysis/Evaluation*

Design a working model of some timekeeping device, e.g., sundial, shadow stick, water clock. Explain in a short report how it works. *Application*

Record and evaluate the efficient use of your time. Determine techniques for improvement. *Analysis/Synthesis/Evaluation*

Decide if the angle between the hands of a clock is changing at a constant rate. If so, complete the graph.

Time	Angle between hands
12:00	0°
12:15	82 1/2°
12:30	
12:45	
1:00	

Application

Performance Objectives	**Activities**
The student will be able to:	
	Show on a table how much you would earn in a 30-hour week if you were paid 1¢ for the first hour, and your wages were doubled each successive hour. *Application*

Theme: Time

Communication Arts Grade 6

Performance Objectives	**Activities**
The student will be able to:	
Develop a deeper understanding of history through poetry.	After investigating a historical period, choose representative poems to illustrate a poetic interpretation of history, e.g., Civil War--"Oh Captain, My Captain" by Walt Whitman. *Analysis/Application*
Write and perform persuasively.	Create and perform in a skit which portrays an inventor trying to convince a finance company to produce his latest time-keeping device. *Synthesis* Compose a speech to defend your choice of moment, era, decade, or period as the winner in the "Most Important Time Awards" contest. *Evaluation*
Use creative dramatics for developing imagination.	Create, cast, and perform a skit which shows several consequences of a life without clocks. *Synthesis* Defend, in a speech to your classmates, your actions as a famous historical figure. Base your facts on the materials read. *Evaluation*

Performance Objectives	Activities
The student will be able to:	
Use language to persuade.	Zodiac signs were created to mark the passage of time. After reading a description of your zodiac sign and following your horoscope for a week, refute or support a belief in horoscopes for a teen magazine editorial. *Evaluation*
Develop imaginative thinking.	Ancient people frequently named months based upon observed phenomena, e.g., rainwater, great snow, rise of insects. Create modern names for each month based upon your own observations of "timely" occurrences, e.g., Marathon Month. *Synthesis*
	Hypothesize where time goes once it has passed. Draw a map to show your classmates. *Synthesis*
Measure the effectiveness of story clues.	Read several two-minute mysteries by Arnold Sobel. Record the time it takes you to solve each. Analyze the clues to determine how you were helped, and if there is a pattern. *Analysis*
Organize ideas for reporting; give examples; cite authority for facts.	After reading A Wrinkle in Time by Madeleine L'Engle, explain the tesseract. Hypothesize what you would find if you could tesser through space and time. Compare your adventures to those of Meg and Charles. *Analysis/Synthesis*
Identify major and underlying ideas presented in literature.	Read one of the following books: Wizard of Oz by L. Frank Baum Alice in Wonderland by Lewis Carroll The Little Prince by Antoine de Saint Exupéry A Christmas Carol by Charles Dickens Choose an incident in which time plays an important part and explain how the characters experience time and whether it differs from the way we experience it. *Analysis*

Theme: **Time**

Science Grade 6

Performance Objectives The student will be able to:	**Activities**
Identify main idea.	Investigate the sources of powering time-keeping devices. Classify these devices according to whether they are intrinsically (timing device within) or extrinsically (outside source, sun, arm movement) powered. *Application*
Use imagination in applying scientific principles.	Design a device for telling time which has no moving parts on its face. Make a model or diagram. *Synthesis*
Recognize mutual interaction of science and society.	Sun worshippers meet annually at Stonehenge, England, in celebration of the sun. Research and evaluate the evidence supporting the hypothesis that the great stones and arches at Stonehenge were used by ancient people as a calendar. *Application/Analysis/Evaluation* Evaluation Astrology connects the calendar with astronomical bodies. Defend or counter, in a school newspaper editorial, the introduction of astrology as part of the curriculum. *Evaluation*
Observe and describe details.	Relate mythology to the stars and astronomy. Observe the night sky and locate the constellations. Research the myths behind them. *Application*
Make inferences from data collected through observation and research.	Create an original myth for a constellation you have "discovered." *Synthesis*

Performance Objectives	**Activities**
The student will be able to:	
Make predictions based on existing evidence.	Throughout the earth's history various geological changes have occurred. Scientists have used these major geological changes as a basis for dividing the Earth's history into Eras (Ages). 1. Research the origin of the geological timescale. 2. Identify the Earth's major Eras and the geological changes that characterized them. 3. Predict future geological changes and name the new era appropriately. *Application/ Synthesis*
Discover cause-effect relationships.	Graph the change in life expectancy over the last 3000 years. Interpret the data and the causative factors. *Analysis*
	Contrast and compare circadian (daily) rhythms to circanian (seasonal)rhythms. Give examples of each. Predict the consequences of an interruption in either. *Analysis*
	When the earth was young there were no mountains. With the passage of time, the life of a mountain goes from "a vigorous youth to a long old age." Mountains have had a great impact on the history of the earth and its life forms. Investigate the ways mountains have affected the course of life by choosing one range to research. *Application*
Develop conclusions related to given evidence. Question assumptions and interpretations.	After doing extensive research on Darwin's theory of evolution, refute or defend the statement that "the time is not far off when people will have to regulate their numbers and control their genetic development." *Evaluation*

Theme: **Time**

Social Studies Grade 6

Performance Objectives The student will be able to:	Activities
Recognize cause and effect relationships.	Research the life of Scottish geologist, James Hutton, to determine how he came to believe that "the present is the key to the past." *Application*
Make inferences from data collected through research.	Design a tool that might be used by a twenty-first century archeologist. *Synthesis*
Determine alternatives before reaching a conclusion.	Compare and contrast the various methods for dating archeological finds to determine the most efficient and accurate ones. *Analysis*
Develop personal insight.	Diagram your life as if it were a cross-section of a tree. (Remember narrow rings represent hard years, wide rings represent good years.) *Analysis*
Identify main idea and supporting detail.	The Mayans believed that history repeated itself, at least in theme, every 260 years. Given this belief, predict what historical events might be repeated. *Application*
Recognize the difference between belief and fact. See the importance of sources of information.	Given that an American coin is found in 500 years: Judge what could be merely speculated about, and what could not be determined at all, regarding the culture that produced the coin. *Analysis/Evaluation*
Identify problems and seek solutions.	Identify problems resulting from increasing the human life span. Consider and suggest a solution for each identified problem. * *Analysis/Synthesis*
Identify and develop evidence to support a conclusion.	Given the adage "Time heals all wounds," choose three examples from our nation's history that support this statement, and three others which refute it. *Evaluation*

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*See the full development of this activity on p. 158.

Theme: **Time** Mathematics All Grades

Performance Objectives	Activities
The student will be able to:	
Increase his/her production of ideas. Generate ideas with greater originality than before.	Using a stopwatch list all the "red" things you can within one minute. *Fluency* Suppose there were no clock. How many different ways could you measure time? *Flexibility* Redesign a clock using unique symbols in place of accustomed numbers, e.g., hobbies, interests. *Elaboration*
Realize that almost everything could be improved.	In order to increase leisure time invent new ways for your parents to do their chores. *Fluency*
Provide suggestions for improving time management.	In how many different ways can you control the time it takes to prepare a particular food? *Flexibility* Using an instrument, e.g., a xylophone, create an original melody which requires striking each note a minimum of three times. *Originality* How could you improve budgeting your homework time? *Flexibility*
Generate ideas with descriptive criteria.	Redesign a calendar to make it more useful to a particular lifestyle. *Elaboration* If there were a 25th hour, how many different ways would you like to spend it? When would this hour be? *Flexibility*

Performance Objectives The student will be able to:	**Activities**
Follow many directions of thought.	In how many different ways are you like a clock? *Flexibility*
	Where have numbers been important in your life? E.g., birth-weight. *Fluency*
	List all the things you could do with last year's calendar. *Fluency*
	What can you create using the pieces from two broken clocks? *Originality*
Produce ideas with judgmental standards.	If you were a clock face, which number would be your best friend? Why? *Originality*
Suggest many solutions to a problem.	A time clock vault cannot be opened before a certain hour to which the clock has been set. Think of as many uses for such a device as you can. *Fluency*
	Consider how many activities in your day take you about 15 minutes to complete. *Fluency*
	List one thing that will always happen one thing that will never happen one thing that might happen. *Originality*
	How many different ways could you use a pencil, a paper, and a piece of string to measure time? *Flexibility*
	List three things you could do in: ten seconds; ten minutes; one hour; one day; one month; one year. *Originality*

Performance Objectives The student will be able to:	**Activities**
	Estimate how long it would take you to write the entire alphabet ten times. Time yourself. *Fluency*
Develop hypothetical evaluations.	After reading Cinderella consider what different things might have happened if the clocks in the palace were all broken and couldn't strike "12." *Elaboration*
	List all the things you can that change with the passage of time. *Fluency/Flexibility*

Theme: **Time**

Communication Arts All Grades

Performance Objectives The student will be able to:	**Activities**
Determine the possible effects of a given situation.	Imagine what would happen if time stood still for one day. Describe or illustrate the consequences. *Elaboration*
Become more aware of personal values.	List all the things you'd like to spend more time doing. *Originality*
Suggest alternative solutions for given problems.	In how many different ways could you arrange to be awakened at 7 A.M. without using an alarm clock? List and describe these. List all the ways you could make the nighttime less scary. *Fluency*
Perceive an imaginative situation realistically.	Imagine if you "could save time in a bottle." What would you do with it? *Elaboration*

Performance Objectives The student will be able to:	**Activities**
Develop fluency, flexibility, and originality by participating in activities requiring divergent thinking.	Identify as many different activities as you can for which you must be on time. ***Fluency***
	List all the songs you know which make reference to time. Into how many different classifications can you group them, e.g., by seasons, by the hours? ***Fluency/Flexibility***
	Imagine you could be anything at all for a few seconds. Explain your choice. ***Originality***
	List your ten most valued possessions in priority order given five minutes to make a decision. Defend your choices. ***Elaboration***
	Examine a clock through the eyes of a a harried homemaker; a busy business executive; a melancholy musician. ***Elaboration***
Develop a broader interpretation of the concept of time.	Invent a new meaning for the word "time." ***Originality***
	Some things may be worth doing more than one time; others not even attempted once. Name several things you have never done but would like to try to do. Explain why. Name several things you have done before but hope never to have to do again. Explain why. ***All skills***
	Consider how you would let a friend know you were upset by his/her frequent lateness for appointments. ***Elaboration***

Performance Objectives	Activities
The student will be able to:	
	Name all the activities you can think of that are time-consuming such as homework chores. List all of those activities which take no time at all such as blinking your eye or saying, "I love you." *Fluency*
Understand and interpret figurative language.	Consider the questions raised by the following expressions or phrases: "Time hangs heavy on my hands." When is time heavy? Why? "Time flies when you're having fun." What is the speed of time? "The shape of things to come." What is the shape of the future? When can we see the future in the present? Give an example. "In no time at all." What is the length of time? *Originality*
Produce a number of divergent responses.	List all the things you can think of that improve with age. *Fluency*

Theme: **Time**

Performance Objectives

The student will be able to:

Increase divergent production.
Make judgments based on an internal criterion.
Utilize talent for original and creative thinking.

Utilize imagination for creative problem solving.

Utilize talent for creative thinking.

Increase divergent thinking.

Science All Grades

Activities

List all the changes that might occur if it rained 50 days and 50 nights. (Any weather condition that may occur over an extended period of time may be substituted, e.g., heat wave, drought.) *Elaboration/Fluency*

Identify as many things as you can that have a steady beat, e.g., tick tock of a clock. *Fluency*

In how many ways are a calendar and a tree alike? *Flexibility/Originality*

List the ways your body can act as a clock. *Flexibility/Originality*

Determine which time of day best describes your personality. Explain why. *Originality/Elaboration*

Imagine:
What color is 12 P.M.?
What shape is July 4th?
What sound is now?
What taste is long ago?
How does winter smell? *Originality*

Imagine how your shadow feels early in the morning or late afternoon. *Elaboration*

Invent a device to increase leisure time. *Originality*

In how many ways could you explain an eclipse to an extraterrestrial? *Fluency/Elaboration*

Performance Objectives

The student will be able to:

Activities

Determine the sense on which you most rely to tell the time of day. Explain why. *Elaboration*

Imagine you are a willow tree. Describe what you would see, feel, and hear with the passage of time from Spring to Winter. *Elaboration*

Determine in how many ways time is different to a butterfly and a giant redwood. *Elaboration*

Theme: Time

Social Studies All Grades

Performance Objectives

The student will be able to:

Communicate thoughts, ideas, and opinions.

Reflect awareness of social situations that impact on his/her life.

Achieve deeper insight into one's own attitudes and behavior as well as those of others.

Activities

List all the different products you can think of that evolved from the wheel. *Flexibility*

Predict what would happen if all the boys and girls your age suddenly turned into adults. *Elaboration*

List social situations which will improve with the passage of time. *Elaboration*

Record all the words you associate with "time" within a three minute period. *Fluency*

Imagine how you're going to care for your best friend's pet alligator for the next three hours. *Originality*

Performance Objectives The student will be able to:	**Activities**
	List all the things that happen in your life when "it's time," e.g., time to go to bed, time to brush your teeth. *Elaboration*
Increase fluency of production.	Record all the occupations which involve time schedules. *Fluency*
Elaborate on give themes and ideas.	Create a timeline for the shortest period of time you might consider and indicate what occurs at each point of the line. *Originality*
	Chart all the items you would expect to find in a time capsule dated 1500. *Originality*
	Determine under what circumstances an hour would seem like a minute; a minute like an hour. *Elaboration*
	List all your thoughts on the phrase "the time of your life" within three minutes. *Fluency/Flexibility*
	Determine how much time is "all the time in the world." *Elaboration*

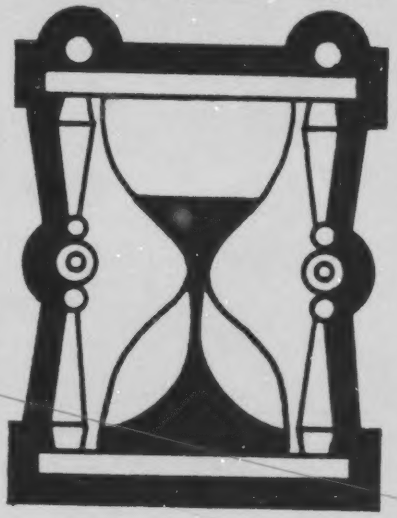
SUGGESTED INDEPENDENT RESEARCH ACTIVITIES

Theme: Time

*Given a specific date within the last 200 years, learn as much as possible about life in New York City on that date in all areas, for examples, politics, economics, the arts, education, society, science, domestic and foreign policy. Extend research to other cities, states and countries. Write a factual report of your findings.

*Using the Almanac and/or the Encyclopedia, design a calendar of significant historical or cultural events for each month.

*You are a scholar investigating your changed neighborhood. Use the techniques of inquiry and discovery to find out how the neighborhood looked *then* and *now*. Interview elderly residents and search out authentic source material. Present a pictorial essay of your findings.



At this center you can . . .

1. Flow chart your day's activities.
2. Time comparison of activities.
3. Determine the kinds of angles created by clock hands.
4. Predict the fractional number of times a numeral might appear in a book.
5. Plan a trip around the world.

TIMELY TOPICS CENTER

XII
I
II
III
IV
V
VI
VII
VIII
IX
X
XI

Olympic Planning

If we had a class Olympics when would be the best time of day to hold it?

Time several children in an activity in the morning and afternoon.

Graph your results and analyze the data.

Around the World in 80 Days

Like Phineas Fogg, you are going on a trip around the world in 80 days.

Consider timetables, distances. Plot the route on a map.

The 100-Page Book

What fractional number of times would you expect the numeral 3 appear in a 100 page book?

How many whole numbers less than 100 are multiples of three?

Create your own problem for the 100-page book.

Clock Angles

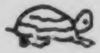
Predict how many different kinds of angles are created by the hands of a clock in an hour's time.

Classify obtuse, acute and right angles.

IT'S ABOUT TIME!

Timely Poetry

Compose a poem in which a clock is personified. What would it say? What would it do?



Evaluate

After reading the fable *The Tortoise and the Hare,* evaluate the moral "slow and steady wins the race."

?? What If ??

Predict the consequences if you—
—didn't do your homework on time
—didn't go to sleep at an early hour
— woke up too late for breakfast

Paint a Happy Time

Determine in what colors you would paint a happy time. What happy time would you paint? Paint It!

12
1
2
3
4
5
6
7
8
9
10
11

At this center you can . . .

1. Compare stories, jokes, and fortunes.
2. Compose a timely poem.
3. Evaluate the moral of a story.
4. Compare the passage of time.
5. Predict the consequences of not paying attention to time.
6. Paint a happy time.

Expanded Teaching/Learning Strategies

Why Did They Act Like That? *

RATIONALE

The aim of this lesson is to understand the motivations of characters in literature; what makes the characters tick and act the way they do.

PERFORMANCE OBJECTIVES

Students will be able to:

- Judge the motivations of characters.
- Compare the motivations of characters.

MATERIALS

- Babar and the Wully-Wully by Laurent de Brunhoff.
- Worksheet 1, p. 165, on human characteristics.

STRATEGY

- Read Babar and the Wully-Wully aloud to the class. While reading discuss with students the events that take place and the behavior of the characters in the story by asking:
  - What did Flora, Pom, and Alexander find?
  - Why do you think they took the Wully-Wully home?
  - What would you do if you found a Wully-Wully? Why?
  - Why do you think Rataxes took the Wully-Wully?
  - How did everyone feel when the Wully-Wully was gone? Did you ever lose a pet? How did you feel? What did you do?

***This is an expansion of the activity which can be found on p. 10.**

STRATEGY (Continued)

- How did Zephir and Arthur try to get the Wully-Wully back? (Discuss different plans and their success or failure.)

- When the rhinos come and take the Wully-Wully away again, Babar decides they must go to war. Is this a good idea? Why or why not?

- Why is little Flora worried? What happens when there is a war?

- What was Flora's plan? Why does she decide to see Rataxes?

- How do we know her plan worked?

. Review - the animals in this story had reasons for behaving in different ways. Ask the students to consider:

- Why did the little elephants bring the Wully-Wully home?

- Why did Rataxes try to keep the Wully-Wully?

- Why did Arthur and Zephir try to rescue it?

- Why was Babar ready to go to war?

- Why didn't Flora want a war?

- How did Flora make everyone happy?

. As a follow-up activity distribute Worksheet 1 and ask the students to explain how the members of the animal family in this story exhibit human behavior and emotion. The students should back up their answers with specific references from the text.

Discovering Physical Changes Wrought By Time*

RATIONALE

To the careful observer change is evidenced in all things. Slow changes take place over long periods of time altering the physical and chemical structure of matter and gradually transforming natural and people-made systems. Sidewalks crack, metal oxidizes, soil erodes, and living things grow while these processes generally go unnoticed by the casual observer.

The student of science learns how to recognize environmental change, how to observe changes carefully, how to measure and compare changes, and how to relate change to present and future impact on an area.

PERFORMANCE OBJECTIVES

Students will be able to:

- Discover physical changes in their environment wrought by time.
- Describe a method of observing and recording physical changes in their neighborhoods.
- Explain how these changes occur and what result these changes have on the area in question.

MATERIALS

Hoop or wire hanger, simple camera or instant developing camera and film, magnifying glass.

---

*This is an expansion of the activity which can be found on p. 62.

STRATEGY 1

Photography provides us with a way to "freeze" occurrences in time and make before and after comparisons with a high degree of objectivity. A serial collection of photographs of a single feature or selected location can yield valuable information regarding physical changes which are evidence of slow, often unnoticed change.

- Plan a field walk to a familiar area (some place that can be revisited easily by the students). Supply individuals or groups of students with simple cameras or instant developing cameras.
  - Select sites that seem to suggest that some observable change is taking place, e.g., sagging gutters, tree trunk or root growing through pavement, a hillside gully, littered area, rusting metal, etc.
  - Photograph the changing subject and devise some way to measure the rate of change. For example, a meterstick might be included in a picture of a gully to provide an indication of scale.
  - Record the location, date, time, and other pertinent information. Identify this date as belonging to a particular picture or frame on the roll or disc of film.
  - Maintain an indexed collection of field notes keyed to the appropriate photograph(s).
  - Decide on a time or date during which you will revisit the selected site(s) and again photograph and document any evidence of neighborhood change.
  - Repeat this procedure as often as deemed practical by you, your fellow students and teachers.

- What kinds of changes are evidenced by this investigation?
- What is the relative degree of change? (Fast, slow, radical, minimal, etc.).
- How does this change affect the community?
- Will this change give rise to other changes?
- Are any of these changes dangerous to members of the community?
- If these changes are either dangerous or undesirable, who or what agency should be notified to correct the situation?
- Write a letter to the appropriate agency outlining your concern about this neighborhood change.

STRATEGY 2

Archives, historical societies, libraries, and museums maintain collections of photographs, engravings, drawings, and descriptions of communities which outline and document the growth and evolution of neighborhoods in our city.

. Visit these facilities to study and borrow or duplicate descriptions and images of your neighborhood.

  - Compare old images of your neighborhood to the way these places actually look today.
  - What major changes have occurred in this area?
  - Over how many years have these changes taken place?

STRATEGY 2 (Continued)

- Which of these changes seems to be the most important to you? Explain your choice.

- Search for evidence of small changes. Concentrate on details (street names, fire hydrants, etc.).

- What changes are you aware of which have not or cannot be documented in the images and reports available to you? How important are these changes?

- Invent a way of measuring the subtle changes in your neighborhood not presented in the available images and data.

STRATEGY 3

Family photo albums are good sources of photographs of a neighborhood over a period of time. Moreover these photographs are usually dated or can be dated relatively easily.

. Ask the students to bring in old family snapshots that were taken outdoors. Have students examine the photos concentrating on backgrounds rather than the people in the picture (although dress, hairstyle, etc., are also indications of change) and then discuss the following:

  - Can landmarks (stores, monuments, homes, etc.) be identified in these photographs? Are these landmarks still around today? How have they changed?

STRATEGY 3 (Continued)

- Examine the trees and shrubs in these photographs. How have they changed over time?
- Do any of these photographs include pictures of you or other students? How is this evidence of change?
- Predict how these subjects will look when they are photographed five years from now...twenty years from now...fifty years from now...one hundred years from now.

STRATEGY 4

. Direct students as follows:

- Walk to a park, neighborhood area or the school yard. Throw a hoola-hoop or hoop of coat hanger wire backwards over your shoulder. (Note: Be careful of others and also of windows or other property.) Wherever the hoop lands you will have selected a specific area at random.
- Examine the area inside the hoop carefully. You may wish to use a magnifying glass or camera to help you record information.
- Describe what is to be seen inside the hoop, i.e., plants, cracks in pavement, seeds, litter, etc.
- Carefully note the position of your hoop so that you can return to exactly the same location in the future. You may wish to outline the circumference of the hoop on the ground with a crayon or chalk. Special crayons are available at lumber yards and surveying supply stores for this purpose.

STRATEGY 4 (Continued)

- List your observations carefully or dictate them to a recorder (another student or an adult).

- Predict what changes you expect to see in this area over some selected period of time.

- Visit your "hoop area" repeatedly over the school year noting any changes and verifying your predictions.

. Discuss these changes in class with the students and ask:

- Which changes are natural?

- Which are caused by people?

- Which changes do you consider to be good? Defend your position.

- Are there any changes that should be brought to the attention of someone or some agency? For example, are there any dangerous cracks in the sidewalk that might result in someone falling and getting injured? What authorities should be notified to correct such problems?

TEACHER REFERENCES

Betros, Harry F.	Understanding Schoolyard Ecology - *A Manual - A Manual for Teachers and Youth Leaders*. New York: Exposition Press, 1972.
Burness, Gordon.	*How to Watch Wildlife*. New York: Van Nostrand Reinhold Co., 1972.

TEACHER REFERENCES (Continued)

Dacey, John. *Where the World Is - Teaching Basic Skills Outdoors*. Santa Monica, Calif.: Goodyear Publishing Co., Inc., 1981.

Hillcourt, William. *Field Book of Nature Activities and Conservation*. New York: G.P.Putnam's Sons, 1961.

Hug, John and Wilson, Phyllis. *Curriculum Enrichment Outdoors*. New York: Harper & Row, 1965.

Operation New York - Using the Natural Environment of the City as a Curriculum Resource. New York City Board of Education, 1960.

Weitzman, David. *My Backyard History Book*. Boston: Little, Brown & Co., 1975.

Holidays Are Made, Not Born *

RATIONALE

The aim of this lesson is to enable the students to make judgments about given events supported by internal criteria and based on the study of holidays and the reasons for establishing them.

PERFORMANCE OBJECTIVES

Students will be able to:

- Determine reasons for establishing holidays.
- Create a special holiday based on research.

MATERIALS

- Any book of holidays.

- First Book of Holidays by Bernice Burnett.
  Holiday Reader by Herman F. Benthul.

STRATEGY

- Read representative stories about holidays.

- Brainstorm and list holidays the children know. Elicit events which correspond to the list of holidays, e.g.:

  - Independence Day ------- the signing of the Declaration of Independence
  - Christmas -------------- the birth of Christ
  - Washington's Birthday -- the birth of the first president

---

*This is an expansion of the activity which can be found on p. 64.

STRATEGY (Continued)

- Determine reasons for celebrating an event by declaring a holiday, e.g.:

  - religious (holy day)
    national
    legal
    by proclamation
    regional

- Categorize holidays on the list the children developed, e.g.:

  - religious -------- Christmas, Passover
    national --------- Independence Day, Veterans Day
    legal ------------ New Year's Day, Labor Day
    by proclamation -- Thanksgiving Day, Solidarity Day
    regional --------- Robert E. Lee's Birthday, Dia de los Tres Reyes

- Lead the students to generalize that most holidays are set aside to help remember an event or to honor some great person.

- As follow-up activities ask students to:

  - Draw a picture showing your family celebrating a favorite holiday.

  - Write a story entitled "My Favorite Holiday" which describes your favorite holiday.

  - Research and report on the events that led to the establishment of an existing holiday.

  - Use a newspaper or magazine to identify an event or person worthy of remembrance. Tell, in an oral presentation to the class
    --a)who or what is the subject of your suggested holiday.
    --b)why we should celebrate this person or event.
    --c)how we should celebrate the holiday.

Geometric Shapes in Our Environment *

RATIONALE

A variety of geometric shapes surrounds the students but frequently they are unaware and do not realize this. In order to make the students aware of these geometric figures, and rectangles in particular, opportunities must be provided to heighten their powers of observation.

PERFORMANCE OBJECTIVES

Students will be able to:

- Recognize four-sided polygons.
- Recognize which four-sided polygons are rectangles.
- Decide which rectangles are squares.

STRATEGY

- Display a collection of polygons of many numbered sides (three, four, five, six). They could be cutouts from different colored oaktag. Ask students how the shapes differ and lead them to the conclusion that the number of sides is different.
- Hold up a triangle and ask the class:

  - What do we call this shape?

  Elicit triangle or three-sided polygon.
- Hold up a polygon with four sides and elicit from the class that this shape is called a four-sided polygon. Do the same with polygons of four, five, and six sides.
- Repeat the entire procedure.

---

*This is an expansion of the activity which can be found on p. 18.

- Introduce the study of four-sided polygons having "square" corners by holding up a number of different four-sided polygons having some corners that are square and some that are not square. Hold up another set of four-sided polygons each having four square corners. Instruct the class to count the number of square corners, then ask students:

  - What do we call a polygon of four sides that has exactly four square corners?

  Elicit that such a polygon is called a **RECTANGLE** and that the polygons previously shown that did not have four square corners are not rectangles. Ask the class:

  - Where in the classroom do you see a rectangle besides the ones I have shown you?

  (Possible answers: floor, ceiling, chalkboard, desk, paper, side of a book, etc.)

- Fold one side of a rectangle onto the opposite side and elicit that the opposite sides of a rectangle have the same length. Review with the class that a rectangle must have four square corners and that the opposite sides have the same length. Have the class fold paper rectangles so that the opposite sides have the same lengths. Lead the students to see that the adjacent sides of a rectangle need not have the same length.

  The class should perceive that these rectangles have not only opposite sides with the same length but that all four sides have the same length. This can be shown by folding one corner onto the opposite corner and noting that adjacent sides also have the same length.

STRATEGY (Continued)

. Show class a collection of rectangles that includes squares and ask the following:

  - What do we call a rectangle that has all four sides of the same length?
  - Which of these rectangles are squares?
  - What makes a rectangle a square?
  - Is every square a rectangle? Why?
  - Is every rectangle a square? Why not?
  - Where have you seen squares?

. Summarize the various shapes by using the visual aid described on page 124.

  - How can you fold a square to show all four sides have the same length?

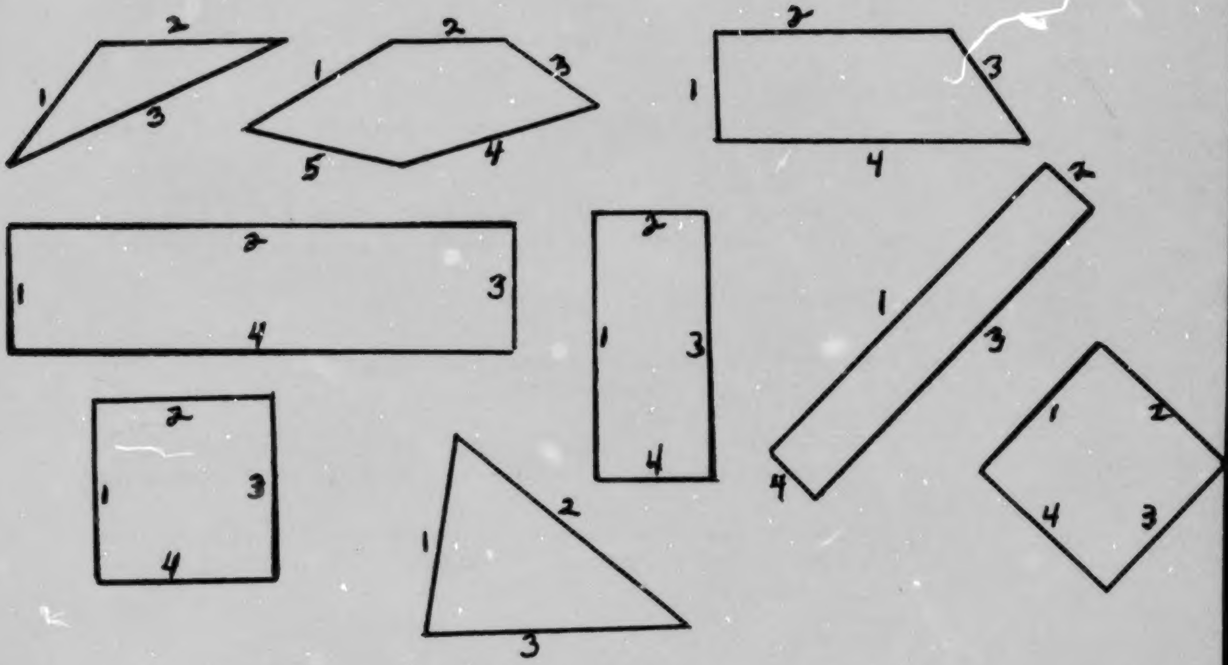
. Prepare and distribute a worksheet with polygons of three kinds. Have students do the following:

  - Identify those polygons that are four-sided.
  - Identify those four-sided polygons that are rectangles.
  - Identify those four-sided polygons that are squares.

STRATEGY (Continued)

- Ask students to do the following assignment:
  - Bring in an object from home that has the shape of a rectangle but is NOT a square.
  - Bring in an object that has the shape of a square.
  - Find an object that has a shape that is four-sided but is NOT a rectangle and be prepared to describe it to the class or bring it in.
  - Find an object that has more than four sides to it and be prepared to describe it to the class or bring it in.
- As an optional follow-up activity ask students:
  - If the opposite sides of a four-sided polygon have the same length must it be a rectangle?
  - If a four-sided polygon has exactly three square corners must the fourth one also be square? Must it be a rectangle?
  - If the four sides of a four-sided polygon all have the same length must it be a square? How can you tell when a corner is really square?

POLYGONS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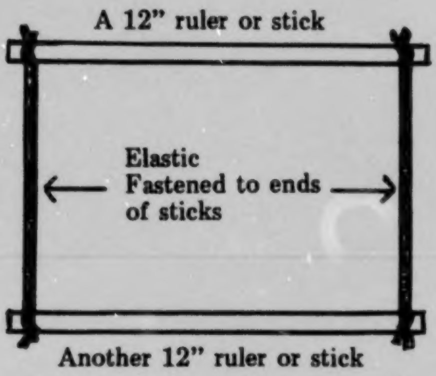
4

This page shows the kinds of shapes that may be used for student worksheets.
(Note: Place geometric shapes at an angle.)

CONSTRUCTING A POLYGON

With this visual aid the teacher can show all kinds of polygons. Moreover, because of the elastic, a dynamic transformation is possible showing how one shape can be transformed slowly into another.


A 12" ruler or stick
Elastic
Fastened to ends
of sticks
Another 12" ruler or stick

To construct a working model you need two sticks of equal length and two pieces of elastic of equal length.

Probability in Our Lives

RATIONALE

It is essential that the students develop an intuitive awareness of probability because of the role it plays in our daily lives as an aid in problem solving. Students should be offered opportunities to investigate, to conduct experiments, to record outcomes, and to draw conclusions based on the evidence. Then they should be led to extrapolate the possibility of something occurring based upon their conclusions.

This hands-on activity based learning leans heavily on multiple trials and observations and avoids pre-stated conclusions.

PERFORMANCE OBJECTIVES

Students will be able to:

- Perform some simple experiements to reveal the nature of probability.
- Estimate the probability of some simple events.

STRATEGY

- Pretend with the class that they are planning a picnic for tomorrow. Elicit what very important information will be needed to help decide whether or not to go ahead with the planning. Ask students to consider the following:
  - Suppose the weather forecast for tommorow is - "The probability of rain tomorrow is 50%" - what does this mean?
- Split the class into teams of three students each as follows:
  - the experimenter who does the experiment
  - the recorder who tallies the results
  - the judge who decides whether or not the experiment was done fairly and if the results should be recorded

*This is an expansion of the activity which can be found on p. 70.

STRATEGY (Continued)

- Some possible experiments for the teams (to be done about 100 times) are:
  - Experiment I
    Tossing a coin and recording the number of times Heads and Tails appear.
  - Experiment II
    Tossing two coins and recording the number of times HH, TT, or neither (HT or TH) appears.
  - Experiment III
    Rolling a die and recording the number of times 1, 2, 3, 4, 5, 6 show.
  - Experiment IV
    Spinning a dial that shows 1, 2, and 3 only. Record the number of times each shows.
  - Experiment V
    Picking a checker from a bag containing 2 red and 3 black checkers. Record the number of reds and the number of blacks.
  - Experiment VI
    Tossing a thumbtack and recording how many times the stem points up and points down.

STRATEGY (Continued)

- The student acting as judge on each team enters the information on the front chalkboard in the appropriate box:

Experiment I: Single Coin Toss Heads: Tails:	Experiment II: Two-Coin Toss HH: TT: Neither:	Experiment III: Dial Spin 1: 2: 3:
Experiment IV: Rolling One Die 1: 2: 3: 4: 5: 6:	Experiment V: Picking One Checker Red: Black:	Experiment VI: Tossing a Thumbtack Stem up: Stem down:

- The following are some sample questions based on the preceding experiments:
  - Do the results for the experiment agree with your expectations?
  - Suppose the number of trials were increased to 1000 or 10,000, how would the results affect your confidence?

STRATEGY (Continued)

- In Experiment I, we say that the probability of the coin turning up heads is one-half. Why do we say this? What is the probability that a tail will turn up?

- In Experiment II, what ought the probability be for:
  HH:
  TT:
  Neither:
  (Theoretically the probabilities should be one fourth, one-fourth, and one-half. Why are there more for Neither?)

- In Experiment III, what might be the reason for the variance in the results? Could they ever be the same? Why not?

- In Experiment IV, what might be the reason for the variance in the results? Could they ever be the same? Why not?

- In Experiment V, guess what the probability ought to be. How did you arrive at your guess? (Theoretically, the probability that a black checker is picked should be 3/5 -fifths and for the red checker two-fifths.)

- For Experiment VI, did you expect the same number approximately for both possible outcomes? Why not? What would you expect if the thumbtack were much longer? Shorter?

- Where else does probability play an important role? (Possible answers: Rates for insurance against fire, theft, accidents, and illness which will vary depending on the probability that such things will happen.)

Who Is Responsible or What's the Story? *

RATIONALE

The aim of this lesson is to enable students to elaborate on a given event and understand how bias influences the way an account is related.

PERFORMANCE OBJECTIVES

Students will be able to:

- Demonstrate that they understand how an account can be biased.
- Evaluate three sources.
- Come up with their own conclusions.

MATERIALS

- Excerpts from The Boston Massacre by Alice Dickinson and Let Freedom Ring by Joseph H. Dempsey.

- Copies of Paul Revere engraving.

- Account of Boston incident from a letter.

STRATEGY

- Discuss with class the significance of the incident that occurred in Boston on March 5, 1770.
- Distribute Worksheet 2, p. 167, an account of the Boston incident taken from a letter written by General Thomas Gage (top commander of the British troops) without identifying the source. Ask students:
    - According to the writer who was responsible for what happened?

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*This is an expansion of the activity which can be found on p. 84.

STRATEGY (Continued)

  - Define riot, massacre.
  - From the viewpoint of the writer of the letter, would you call the event a riot or a massacre?

- Distribute Worksheet 3, p. 169, a copy of Paul Revere's engraving of the Boston Massacre of 1770 which is in the Stokes, Collection, New York Public Library and have students answer the following questions:
  - How does the artist identify the event?
  - On whom does the artist place blame?
  - In what way does the picture seem to disagree with the account taken from the letter?
  - If you were living in the colonies at that time which account would you most likely accept?
- Identify for the class both the writer and artist. Ask students:
  - How did the writer's position as a British commander and the artist's role of colonial patriot influence their points of view and bias their relating of "facts"?
- Distribute Worksheet 4, pp. 171-3, "A Night in March," from the Boston Massacre as an illustration of elaboration on an historical event. Read the account and discuss the following with the class:
  - How does the author set the scene for the action that is about to occur?

STRATEGY (Continued)

- What part of the account can be identified as fact?
- What part of the account is the author's elaboration?
- How does the dialogue make the event more interesting?
- Would the author identify the event as a riot or massacre?
- How does this presentation differ from the letter and the drawing about the same event?

. For a follow-up activity ask the students to create a dialogue by role playing to explain what took place just prior to and immediately following a significant historical event.

Changing Designs of Household Tasks: A Kaleidoscope *

RATIONALE

In the past most of the things used in a home were made in the home. Food was grown in the garden, meals were prepared by processing raw ingredients. Households were cleaned by people in the house - usually women, dusting with rags, sweeping with brooms, scrubbing clothes in a tub of water. Making new clothes, growing gardens, and even making furniture were performed in the household.

Inventions in the twentieth century brought about many changes. Electrically powered household machines such as vacuum cleaners, irons, washing machines, and dishwashers became common, widely-used appliances. Many items formerly made at home are now commercially produced, e.g., clothing, canned and frozen foods, and baked goods. Delivery of these and other goods are facilitated by the use of the telephone and automobile.

This learning activity leads students to explore some of the specific household tasks performed by women nearly a century ago. Later students examine the different ways in which these tasks are accomplished today and the way in which this has altered the lives of women and families.

Students may then consider possible changes in the future and the ways in which these will change family life and careers for men and for women.

PERFORMANCE OBJECTIVES

Students will be able to:

- Read a photograph.
- Analyze the jobs women performed in the house in 1905.
- Compare the changing nature of household jobs then and now.
- Project about future jobs.

---

*This is an expansion of the activity which can be found on p. 34 or p. 78.

MATERIALS

Reproductions of the photo from the New York Times, March 19, 1981. (See Worksheet 5, p. 175.)

STRATEGY

- It has been said that in the twenty-first century each family will probably have a robot to do the household chores. Discuss this idea with the class and ask the following questions:

  - What are the household chores today?
  - Who does these chores?
  - What will the robots do in the twenty-first century?
  - What changes have occurred in the past one hundred years?

- Ask students to consider who did the same type of chore around the house at the turn of the century when they:

  - turn off the lights/heat/radiator.
  - make the toast in the toaster oven.
  - flick the switch of the electric coffee-maker.
  - take the ice cubes out of the refrigerator when setting the dinner table.

- Distribute copies of photo from the New York Times (Worksheet 5, p. 175), have students examine the photograph, and ask the class:

  - What household chores are illustrated by the women in the photograph?
  - What other household chores had to be done?

STRATEGY (Continued)

- In the event that some obvious chores have been omitted, ask:
  - How were homes heated in the past?
  - How were dishes washed?
  - How were clothes made/washed?
  - Who took care of the babies? Who made the baby food?
  - Where was food purchased?
  - Who did the cooking? the domestic tasks?

Set up three columns on the chalkboard dividing household tasks into three sections as follows:

HOUSEHOLD TASKS		
I THEN	II NOW	III FUTURE

- Have students do the following:
  - List household chores/tasks of roughly one hundred years ago in Column I.

STRATEGY (CONTINUED)

- Analyze one of the tasks, e.g., clean diapers for the baby. Explain how it would be accomplished today, and write the explanation in Column II.

I THEN	II NOW	III FUTURE
Baby diapers washed at home	Disposable diapers or commercial diaper service used	

- Look into your "crystal ball" to discover how this chore might be handled in the future and write the answer in Column III.

. Have students follow the same procedure with other examples, e.g., sources of heat for the house.

I THEN	II NOW	III FUTURE
Source of heat: coal/wood stove, fireplace	Steam, oil, gas heat	Solar energy, recycled garbage

. Form committees or pair students to research tasks; make charts of their findings and projections.

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HOMEWORK ASSIGNMENT

Have students:

- ask members of the older generation what household tasks they remember as children. Students add these to the THEN column of their charts and fill in the other two columns.

- prepare a timeline recording the invention of labor-saving devices.

- research the "latest" in labor-saving devices for the home at the turn of the century and prepare and deliver an oral report.

  Student References:

  Sears Roebuck Catalogue - Reprint 1897. New York: Chelsea House, 1976
  Sears Roebuck Catalogue: 1902 Edition. Edited by Alan Mirken. New York: Crown Publishing, Inc., 1970

- Role play some situations in a turn of the century home. For example:

  - -- a group of people peeling fruit for a pie or jellymaking.
  - -- a group of people getting ready to sew clothes for the children and discussing patterns, styles, etc.
  - -- a group of people discussing cooking, cleaning, etc.

What Was Your Grandmother Like When She Was a Girl? *

RATIONALE

Every family has a history, a past filled with unrecorded stories of the significant life events of each family member. These stories have been traditionally handed down from generation to generation by word of mouth, from grandparents to grandchildren. With the high rate of mobility of families in present day U.S. society and the increasing practice of institutionalizing the elderly, children are spending less and less time with older relatives. Many children are unaware of their family's history.

This learning activity provides students with the opportunity of actively participating as historians in collecting and recording the life story of a significant family member. Students learn how the past is recreated through the use of oral traditions and primary source materials. Interview techniques, research strategies, and oral reporting skills are developed as they produce a slide-tape presentation on the life story of their grandmother or an older female relative. In the process, students develop an awareness of the expectations and perceptions of female roles in the past and how these roles have changed today.

PERFORMANCE OBJECTIVES

Students will be able to:

- Identify oral traditions and other primary source materials as a legitimate means of collecting information about the past.
- Summarize the major life events of an older female relative through the production of a slide-tape presentation.
- Compare and contrast the expectations and perceptions of female roles in the past with the present.
- Determine the effects of events upon people.

*This is an expansion of the activity which can be found on p. 48.

STRATEGY 1

- Introduce different sources of information about the past, such as artifacts and material remains (archeological), direct observation (anthropological), and oral traditions and written records (historical).

- Discuss the difference between primary and secondary source historical materials. Introduce oral histories as one means of collecting information from the original source.

  (If possible, present an example of an oral history tape to provide motivation and demonstrate the technique. Oral history tapes are available from organizations such as the Teachers and Writers Collaborative.)

- Roleplay how to conduct a taped interview for the class. Demonstrate interview techniques such as probing and soliciting additional information and basic principles for operating a tape recorder. Provide opportunities for students to interview each other in pairs to practice interviewing techniques.

- Using the questions listed on Worksheet 6, pp. 177-8, "Oral History Interview Questions," have students independently conduct a taped interview with their grandmothers, great-grandmothers, or other older female relatives.

  After completing the interview, ask students to contact at least one other family member (e.g., grandfather, mother, father, aunt) to verify the details of the oral history and record their perceptions about the interviewee. Encourage students to compare and contrast other family members' views with their grandmothers' responses.

STRATEGY 1 (Continued)

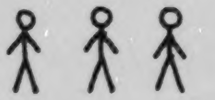
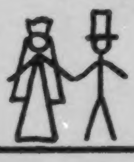
- Instruct students to collect pictures depicting the childhood neighborhood and major life events of the interviewee. Good sources for photographs include other family members and library reference sources such as old newspapers and local history books.

- In the Library-Media Center, explain how to select photographs that convey a pictorial story and then demonstrate how to produce slides using a Kodak Ektagraphic Visual Maker or a camera stand. If an Ektagraphic Visual Maker is not available in your school, contact the Office of Library, Media, and Telecommunications, Multi Media Production Unit, 112 Tillary Street for assistance with slide production.

  After the slides are developed, have students fill out a storyboard sheet to sequence the slides and selected segments of the taped interview in chronological order. Then demonstrate how to synchronize the tape and slides.

  (The storyboard sheet contains boxes in which the students indicate the interview response in the top box and depict the corresponding slide in the bottom box.)

  Example:

What happened?	Grandma goes to college	Grandma working as a bookkeeper	Grandma's and Grandpa's wedding day
Picture	(Grandma with college friends) 	(Grandma at her desk) 	(the bride and groom) 

STRATEGY 2

- Students present their slide-tape presentations to the class. Focus the following questions for discussion on analyzing and comparing expectations for female roles in the past with the present:

  - What activities did your grandmother avoid because she was a girl?

  - Are there activities that girls today do not participate in? If the answer is yes what are some of these activities?

  - How were the roles for girls in the past similar to and different from the roles of girls today?

  - How was your grandmother's choice of career influenced by other family members? (Include homemaking as a career.)

  - What would your grandmother's life have been like if she did not have children?

  - Would you prefer to grow up in your grandmother's time or now? Why?

Expressing Scientific Observations Creatively *

RATIONALE

A study of natural science reveals that over the centuries people from all cultures have depended upon plants as sources of food, medicine, dye, fiber, etc., and have given each plant a commonly used name, which often describes the properties of that species.

Sometimes plant names are simple descriptions highlighting the obvious physical characteristics of the species, e.g., goldenrod, bluebell. In other cases botanists have ascribed a name to a plant which denotes its traditional value as a medicinal or household resource, e.g., soapwort, scouring rush, fever few, fleabane.

Moreover, each plant species has been assigned an official, internationally accepted two-part Latin name which identifies the individual's genus and species, e.g., Quercus alba (white oak), Quercus rubrum (red oak). Often the Latin name, usually the genus, is also the generally accepted and locally used common name as well, e.g., Phragmites communis (common saltmarsh reed) is usually referred to as "phragmites." Frequently plants bear Latin or common names.

PERFORMANCE OBJECTIVES

Students will be able to:

- Recognize common wild plants.
- Recognize that some names of plants are based on physical characteristics.
- Recognize that some plant names are based on their medicinal or household use.
- Research the etymology of common plant names.
- Interview an authority in the field regarding the medicinal properties of plants.

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*This is an expansion of the activity which can be found on p. 39.

STRATEGY 1

A diversity of wild plants may be found in parks, vacant lots, school yards, gardens, and elsewhere. Use one or more of the selected reference books to help you identify the commonly found species listed below. Investigate a vegetated area with your students and direct their attention toward the plants listed.

Arrowwood
Bayberry
Beach pea
Bindweed
Blackberry
Bluebell
Blueberry
Buttercup
Butter-and-eggs
Wild carrot
Cattail
Evening primrose
Everlasting
Goldenrod
Milkweed
Morning glory
Wild onion
Pepperweed
Sunflower

- Challenge students to devise an appropriate name for these plants based on the physical characteristics of each.

- Have students answer the following questions:

  - What characteristic (color, shape, etc.) suggests a name for each plant?

  - Why should you not taste plants indiscriminately?

  - Does the locally accepted common name of each plant seem suitable to you?

STRATEGY 2

- Have students research the etymology of the common plant names listed below by referring to dictionaries, encyclopedia, and botanical source books. Common names often suggest the practical value of a plant or some not too obvious characteristic.

Ambrosia
Aster
Bladderwort
Bloodroot
Boneset
Dandelion
Day flower
Day lily
Dogbane
Fleabane
Glasswort
Heal-all (Self-heal)
Jumpseed
Pineapple weed
Poison Ivy
Queen Anne's Lace
Ragweed
Skunk cabbage
Staghorn Sumac
Thorn apple

STRATEGY 2 (Continued)

- Ask students the following questions:
  - Why are scientific names given in Latin?
  - Develop a list of common names used in different regions for a plant like common mullein (Verbascum thapus). Consult several references. Why do some plants have so many different names?
  - Which prefixes, suffixes, and roots are used often in naming plants? What do they mean?

STRATEGY 3

- Engage students in various activities that will help to familiarize them with various plant forms.
  - "Collect" plants by making drawings, leaf prints, or photographic prints or slides while on a field trip to:

    Botanical Garden
    Beach
    Neighborhood garden
    Vest pocket park
    Environmental center
    Wholesale flower market
    School yard
    Vacant lot
    Forest
    Museum
    Retail florist

  - Visit the herbarium collection at a museum or botanical garden to see how and why plant specimens are preserved.
  - Start a class herbarium collection of local plants.

STRATEGY 3 (Continued)

  - Develop a bulletin board display highlighting local plants.
  - Develop a slide show to present in the classroom or the auditorium on local plants.

- Invite a speaker from one of the agencies listed above to share a presentation on common plants with the class.

STRATEGY 4

- Set up an interview with a pharmacist, physician, herbalist, horticulturalist, or historian to learn how plants were and are used as medicines because of their real (or supposed) properties. Inquire:

  - What are the medicinal or useful properties of the following:

    Boneset
    Feverfew
    Wormwood
    Heal-all (Self-heal)
    Eye bright
    Speedwell
    Toothwort
    Woundwort

  - What reference books are used by specialists to identify plants and their medicinal or useful characteristics.

- Lead students to determine which plants are important based on discussion with their grandparents or other relatives of traditional uses of plants as medicines, cosmetics, or household aids.

- Visit a "health food store" with the class and examine the herbal tea section. Many of the teas are made from common plants. Ask students which ones they recognize.

STRATEGY 5

- Language play can serve to highlight the properties of common plants by using the names of the plants to develop puzzles, puns, and poems. Students can do the following activities:
  - Construct rebus puzzles, e.g., sunflower, dandelion, buttercup.
  - Develop crossword puzzles, word search puzzles, etc.
  - Program a computer to play Hangman by randomly selecting plant names from a list that you have developed.
  - Invent a game based on the knowledge you have acquired of plants and their properties.

TEACHER/STUDENT REFERENCES

School and public libraries contain a wealth of reference material relating to plants and botanical studies. The following books, however, may serve teachers and students particularly well in exploring the plant species common to the New York metropolitan area.

Bailey, L.H.	How Plants Get Their Names. New York: Dover Publications, Inc., 1963.
Borror, Donald J.	Dictionary of Word Roots and Combining Forms. Palo Alto, Calif.: Mayfield Publishing Co., 1960.
Busch, Phyllis S.	Wildflowers and the Stories behind Their Names. New York: Charles Scribner's Sons, 1977.

TEACHER/STUDENT REFERENCES (Continued)

	New Pronouncing Dictionary of Plant Names. Chicago: Florists' Publishing Co., 310 South Michigan Ave., 1964.
Martin, Alexander.	Weeds. New York: Golden Press, 1972.
Newcomb, Lawrence.	Newcomb's Wildflower Guide. Boston: Little, Brown & Co., 1960.
Center for Curriculum Development.	Operation New York. New York City Board of Education of the City of New York, 1960.
Page, Nancy M. and Weaver, Richard E.	Wild Plants in the City. New York: Quadrangle/New York Times Book Co., 1975.
Peterson, Roger Tory and McKenny, Margaret.	A Fieldguide to the Wildflowers. Boston: Houghton Mifflin, 1968.
Riedman, Sarah R.	Naming Living Things - The Grouping of Plants and Animals. Chicago: Rand McNally & Co., 1963.

*Equality in the Family**

RATIONALE

In many families, household tasks and child rearing responsibilities are assumed by the woman of the house even though today a greater percentage of women are working full time outside the home. A 1980 study of the Christian Science Monitor reports that in a traditional family, one consisting of a husband, wife, and children, the wife still does 80% to 90% of the housework. Few women complained about this unequal division of labor.

Men have not been expected to participate equally in caring for their children and in sharing housework. Furthermore, stereotypical job roles and behavior in the family have been nurtured and promulgated both in the home and by society.

The culminating activity of these lessons will be the students' evaluations of the jobs, roles and expected behavioral patterns of their family members. When stereotypical inequalities do exist, students will suggest alternatives based upon individual preferences and competencies.

PERFORMANCE OBJECTIVES

Students will be able to:

- Identify, analyze, and clarify their feelings, ideas, beliefs, and attitudes about traditional and non-traditional family roles, behavior, and jobs.
- Determine the various skills needed to perform jobs within the family.
- Analyze the sources that promote and reinforce stereotyping in terms of sex-appropriate jobs, roles, and behavior within the family.
- Suggest ways by which women and men, girls and boys can share skills and work together in the family.
- Evaluate the jobs, roles, and behavior of their family members in terms of sex equity.
- Research a subject through interview and direct observation.

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*This is an expansion of the activity which can be found on p. 40.

STRATEGY 1

Independent action is needed to eliminate sex-stereotyping in the family. In order to formulate consistent values and beliefs, students must first examine their personal values and biases.

- Distribute values clarification Worksheet 7, p. 179, "Unfinished Sentences." After students have completed the unfinished statements, ask the following questions:

  - **Why did you finish the sentence that way?**

  - **Who disagrees with that answer and why?**

- Distribute Worksheet 8, pp. 181-2, "Values Voting." Read the statements orally to the class, ask students to vote, and tally the results. Direct students to vote in the following manner:

  - **If you agree with the statement, raise your right hand.**

  - **If you disagree, put your thumb down.**

  - **If you have no opinion or are unsure, fold your arms.**

  After all the votes have been tallied ask students the following questions:

  - **Why did you vote the way you did?**

  - **What effects does stereotyping have on individuality? on equality of opportunity?**

STRATEGY 1 (Continued)

. As follow-up activities ask students to:

- Keep a diary for one week in which you record all of your own sexist comments and behavior in relation to your family.
- List as many commonly held stereotyped assumptions as you can think of. Refute each statement.

STRATEGY 2

Jobs in the home have traditionally been allocated not by preference or by skills needed to do the job, but rather by the person's sex. Students will analyze why some jobs in the home are held mainly by girls and women and others by boys and men.

. Use Worksheet 9, p. 183, "Jobs in the Home," as a homework sheet and as the basis for classroom discussion of the following questions:

- What can you say about the division of labor in your family?
- How are other family members affected when stereotyping occurs in the home?

. As a follow-up activity divide the class into small groups and ask students to:

- Role play a situation in the home whereby the family members exchange roles and jobs for a week for the purpose of eliminating sex-discrimination in the traditional home. The improvisation should include two scenes; one dramatizing the beginning of the week and another dramatizing the end.

STRATEGY 2 (Continued)

- After the follow-up activity has been concluded ask students the following:
  - What effects did the elimination of sex discrimination have in your family? Consider the individual's behavior and attitudes.

STRATEGY 3

Sex-role stereotyping in the family is often reinforced and encouraged by: television commercials that portray women as anxious homemakers who are overly concerned about making a good cup of coffee; television programs that fail to reflect the reality of working mothers; magazine articles; magazine and newspaper advertisements about men's clothing that portray a "tough guy" image.

- Divide the class into small groups. Assign each group to research one of the following to see how male and female members of the family are portrayed in:

TV commercials
TV programs
magazine articles
newspaper and magazine advertisements

- After the research has been completed have a spokesperson from each group report the group's findings regarding jobs, roles, and behavioral expectations of the family members. Ask students the following:
  - What can we do to change sex-role stereotyping in these sources?

STRATEGY 3 (Continued)

- What factors affect how we see ourselves and how we behave?

- How are we influenced by other people's expectations?

. As follow-up activities ask students to:

- Write a letter to the editor of a magazine, or to the producer of a television show pointing out particular examples of sex-role stereotyping and the rationale behind eliminating it.

- Write a non-stereotyped commercial about a household product.

- Set up a non-stereotyped section in the library. Include books, magazine articles, newspaper articles, and short stories that deal with different family structures and non-traditioal roles and jobs in the family.

STRATEGY 4

Sex equity in the family can be achieved by sharing responsibilities, by assuming varied roles, and by behaving naturally.

. Lead the class to discuss the following:

- How does the changing role of women in today's society affect their traditional role in the home?

- Why should an effort be made to expand the family roles of both sexes?

STRATEGY 4 (Continued)

- Suggest ways by which family members can achieve sex equity in the home.

- Evaluate the jobs, roles, and behavior of your family members in terms of sex equity and offer alternative means of achieving equality between the sexes.

Women Win the Right to Vote!!! *

RATIONALE

On August 26, 1920 the 19th Amendment to the U.S. Constitution was ratified which extended the right to vote to all Americans, regardless of sex. Launched by the first women's rights convention in Seneca Falls, N.Y. in 1848, it took over 70 years of campaigning, picketing, petitioning, and hunger strikes for women to secure a right that was accorded to all adult white males by the 1820s and adult black males in 1870. The women's suffrage movement spanned four generations and challenged American society's basic assumptions about the role of women in both public life and the home.

In this lesson, students examine the effect of the women's suffrage movement on the American family by researching and producing an original newspaper on the status of women in 1920. They develop a knowledge and understanding of forces in U.S. history by collecting information from primary and secondary sources on such topics as occupations for women outside the home, education, political activities, and marriage. In addition, students learn how to use library reference sources, research techniques, and writing skills to compose headlines, articles, editorials, and advertisements for an original newspaper.

PERFORMANCE OBJECTIVES

Students will be able to:

- Collect and analyze data on women's lives in 1918-1920 by using primary and secondary source materials.
- Describe the views of different segments of American society toward the women's suffrage movement.
- Analyze the influence of the women's suffrage movement on the American family in 1918-1920.
- Evaluate the advantages and disadvantages of growing up female in 1918-1920.

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*This is an expansion of the activity which can be found on p. 44.

STRATEGY 1

The following activities can be used successfully in the research for and publication of a newspaper.

- Distribute Worksheet 10, p. 185, "Women's Suffrage Movement," and introduce the lesson by reading the newspaper headline and article from 1919 on the women's suffrage movement. Provide a brief history of the women's suffrage movement and inform students that they will be investigating the effect of this movement on American society, and writing an original newspaper on women's lives in 1918-20.

- **Before beginning the research, explain to students how to focus their investigation by skimming an article for an overview, scanning for specific information, and outlining the main idea and the supporting details. Have students** record this information on Worksheet 11, p. 187, "Summary of an Article."

- **Divide students into small groups. Let each group pick a topic relating to women's lives in** 1918-1920.

  Possible topics include:

  Women's Occupations
  Education
  The Temperance Movement
  The Women's Suffrage Movement
  Courtship and Marriage
  Household Appliances and Conveniences
  Social Mores
  Transportation
  Entertainment
  Clothing (see Worksheet 12, p. 189, "Women's Clothing")

STRATEGY 1 (Continued)

Before beginning to research the topics, students are instructed by the librarian in the use of reference sources such as the Reader's Guide to Periodical Literature and the New York Times Index to locate and utilize old newspapers, magazines, and pictorial collections from the school library. If possible, plan class field trips to the local historical society and/or one of the special public library collections (e.g., Schomberg Center for Research in Black Culture) to investigate primary source materials.

Note - If students find it difficult to locate information, discuss possible reasons for the lack of information about the lives of ordinary women. Have them brainstorm to identify alternative sources of information about the past (e.g., artifacts, oral history, interviews, letters, diaries, etc.).

- After each group has compiled information on its topic, discuss how to present the information in a newspaper format. Assign each group the responsibility for a particular section of the newspaper. For instance, the group investigating education could write an article on educational opportunities for women. Information on topics such as household appliances and women's clothing could be represented in advertisements. Occupations for women could be described on the Help Wanted page. Attitudes toward courtship and marriage could be presented in an advice column.

Reserve the front page headline and the editorial page for the group who researched the women's suffrage movement. Have them write the lead article about the ratification of the 19th Amendment and an editorial outlining the goals of the women's suffrage movement.

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STRATEGY 2

- After compiling the newspaper, reproduce it for class distribution, then focus the discussion on analyzing changes in women's lives as a result of the suffrage movement.

  Possible discussion questions:

  - What effect did gaining the right to vote have on women's involvement in political life in 1920?

  - Did the suffrage movement open up new job opportunities for women? Which ones?

  - What other areas of women's lives were affected by winning the right to vote?

  - What other significant events at this time influenced the role of women?

  - List the advantages and disadvantages of growing up female at the time of the women's suffrage movement.

- Direct students to consider the effect of the suffrage movement on the American family.

  Possible discussion questions:

  - If you were living in 1920, how would women gaining the right to vote affect your family?

  - How did the suffrage movement change the relationships between males and females in the family?

- Following the discussion, have students write letters to the fictitious editor of their original newspaper stating their opinion of the women's suffrage movement and how it has affected their family relationships.

A Think Tank Session on the Shifting Nature of Jobs *

RATIONALE

In the last century, the nature of jobs in the United States has changed dramatically because of the shift from a rural to an urban economy. Where once the largest job sector was farming, today scarcely three out of a hundred people earn their living as farmers. In the nineteenth century there were few middlemen or traders; cobblers, bakers, candlemakers sold the wares they made directly to their customers. Many people went into domestic service. Non-elective government positions which were minimal have expanded enormously because of the increased services.

In this lesson, students are provided with information about jobs a century ago and today, and from this they may learn about how the economy has changed and how the jobs of people have changed accordingly in order to project into the future. They should also be led to see through questioning why the retired and disabled category is growing and how these people will share in the labor market, and also require other workers to help them.

PERFORMANCE OBJECTIVES

Students will be able to:

- Read a chart which provides information through symbols.
- Analyze the information on the chart.
- Become aware of the changing nature of jobs.
- Predict changes in the future based on their interpretation of the chart.

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*This is an expansion of the activity which can be found on p. 41 or p. 91.

MATERIALS

Worksheet 13, p. 191, "Occupations: What We Did."
Worksheet 14, p. 193, "Occupations: What We Do."

STRATEGY

- Ask students to adopt "a willing suspension of disbelief" as they find themselves in a time warp....the end of the nineteenth century in America. Ask:
  - How do the people in the city earn a living?
  - How do the people in rural areas earn a living?
  - What sorts of jobs do they have?
- List answers on the chalkboard and ask the following:
  - What should we call this list? (Elicit: Jobs in the Nineteenth Century or other suitable title.)
  - How old do you think you have to be to go to work?
  - How does this affect the job market?
  - If the life expectancy of the population is lowered, what effect does this have on the job market?
- Distribute Worksheet 13, p. 191, "Occupations: What We Did." Lead the students to examine the worksheet. Read the first line to the class and ask:
  - What year is the information based on? What age represents the youngest workers in the work force?

STRATEGY (Continued)

- Out of every 100 people over the age of ten, how many are farmers? farm women?

- How many urban housewives stay at home and work at no other job?

- How many people out of 100 work in factories or mines?

. Proceed in the same manner with the other categories on the chart and discuss:

- Why are there so many farmers? Farm women?

- Why do so many urban housewives stay at home?

. Ask the class to emerge from the time warp into the present. Distribute Worksheet 14, p. 193, "Occupations: What We Do," and discuss:

- Look at the first line of the worksheet. How old do you have to be to be counted in the work force now?

- Notice the next category. Why do you suppose housewives and househusbands are listed together?

- How many are there in this category?

. Have class go through the list noting the numbers involved and the job titles. Comparing the two charts ask:

- Which jobs predominated in the past? Which jobs predominate now?

STRATEGY (Continued)

- What reasons can you think of for the shift in the category of farming?

- What determined how farms were worked in the past? (Elicit: labor, size of farm, power sources.)

- What about the present?

. Elicit comparisons between the two charts by examining the reasons for the changes in the categories. For example:

  - Why are there so many more retired people today?

  - Why are so few people in the domestic and personal services fields today?

  - What might account for the enlargement of the professional category?

  - If we could project the job trends or provide a "job roadmap" of the future, how would it be valuable to people? To government agencies? Which categories would have more workers? Fewer workers?

  - What categories do not appear on the current chart at all, e.g., space, media?

FOLLOW-UP ASSIGNMENTS

. Set up committees to continue brainstorming about the future.

  - Student committees prepare charts entitled "Occupation: A Projection for the Future" for display in the classroom

  - Committees present charts accompanied by oral reports.

. Form a Futurist Club chapter (futurists note trends and predict outcomes) with the purpose of forecasting job trends. As part of this project:

  - Design a button to be worn by chapter members.

  - Make buttons for the chapter members.

REFERENCE BOOK

Bureau of Labor Statistics. Occupational Outlook Handbook, 1978-79 Edition. Washington, D.C.: U.S. Government Printing Office, 1978.

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Student Worksheets

	Human Characteristics
Babar's Family	
King Babar	
Queen Celeste	
Arthur	
Flora	

Account of the Boston Incident

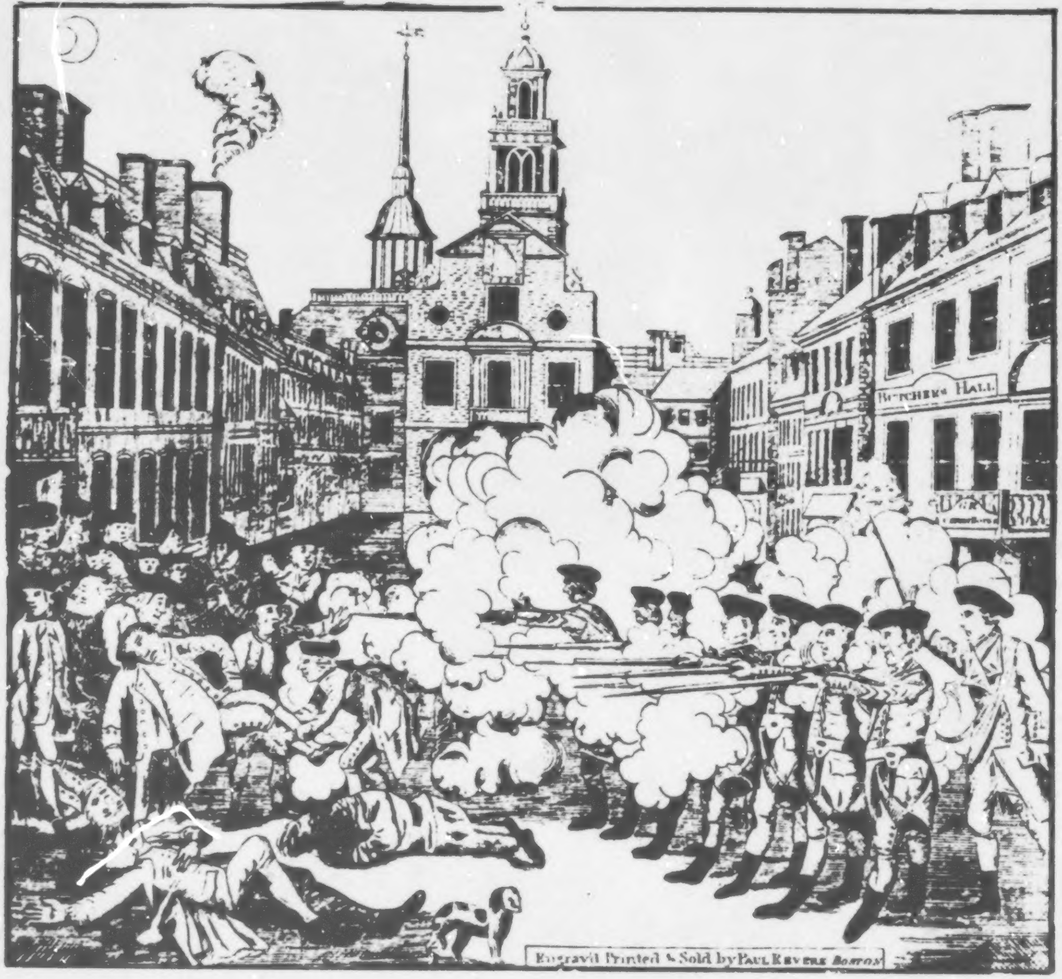
Here is one view of the Boston incident. It is an account taken from a letter written shortly after the shooting.

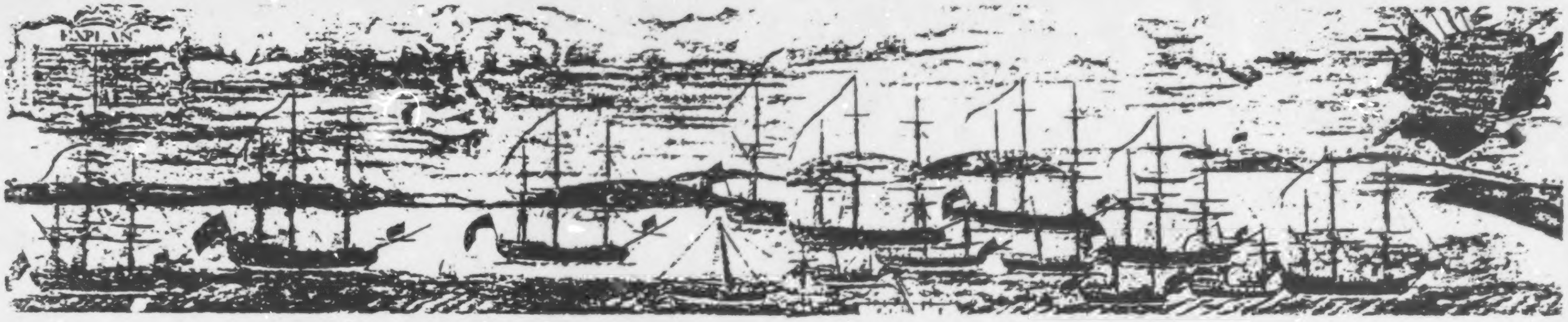
This party as well as the sentinel was immediately attacked, some throwing bricks, stones, pieces of ice and snowballs at them, whilst others advanced up to their bayonets, and endeavored to close with them, to use their bludgeons and clubs; calling out to them to fire if they dared, and provoking them to it by the most [vulgar] language.

Captain Preston stood between the soldiers and the mob, parleying with the latter, and using every conciliating method to persuade them to retire peaceably. Some amongst them asked him if he intended to order the men to fire, he replied by no means, and observed he stood between the troops and them. All he could say had no effect, and one of the soldiers, receiving a violent blow, instantly fired. Captain Preston turned round to see who fired, and received a blow upon his arm, which was aimed at his head; and the mob, at first seeing no execution done, and imagining the soldiers had only fired powder to frighten, grew more bold and attacked with greater violence, continually striking at the soldiers and pelting them, and calling out to them to fire. The soldiers at length perceiving their lives in danger, and hearing the word fire all round them, three or four of them fired one after another, and again three more in the same hurry and confusion. Four or five persons were unfortunately killed, and more wounded. . . .

Engraving by Paul Revere

THE BLOODY MASSACRE perpetuated in King Street BOSTON on March 5th, 1770 by a party of the 29th REG.


BUTCHERS HALL
Engrav'd Printed & Sold by PAUL REVERE BOSTON



Boston Harbor and the landing of the British troops, painted by Christian Remick in 1768. (Stokes Collection, New York Public Library)

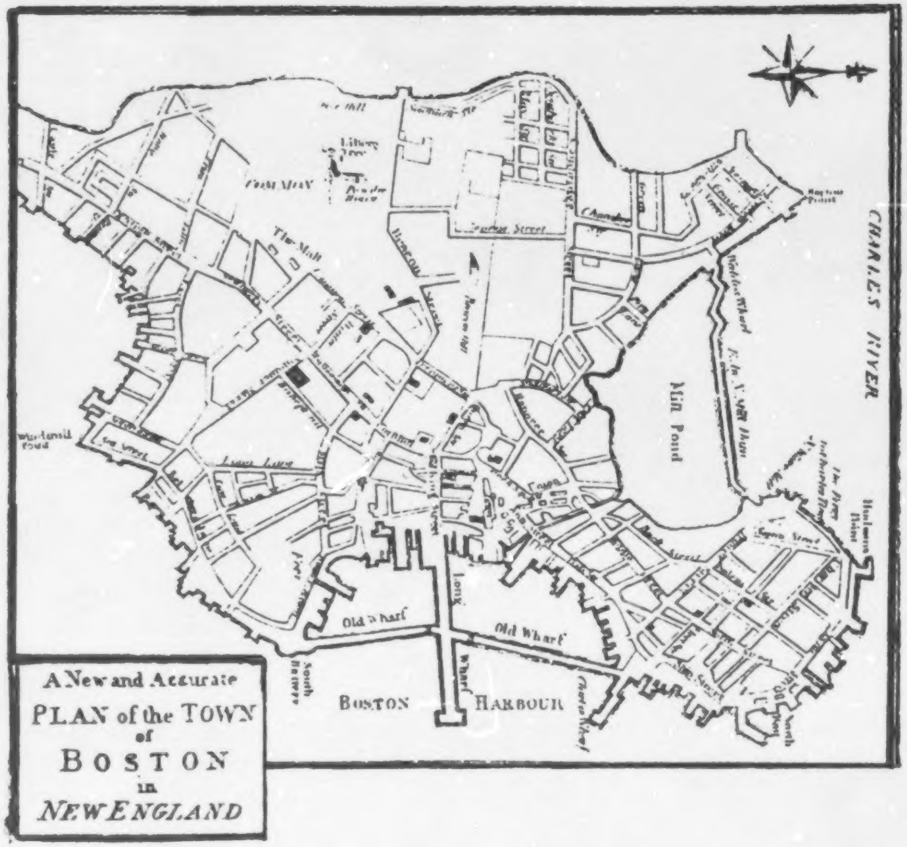
A Night in March

It was Monday, March 5, in the year 1770. All day long, a bitter wind had whined through the gray, narrow streets of Boston, in the British colony of Massachusetts. As the citizens picked their gingerly way through the snow and ice of the footpaths they glanced uneasily at the red-coated soldiers of the British garrison stationed in the city. Trouble trembled in the air. Something unpleasant was brewing, and the British soldiers were a part of it.

Now night was falling. Overhead, a slender, silvery moon hung quiet in the sky. But Boston was astir with a strange excitement. Knots of men and boys appeared dimly in the dusk, strolling the streets carelessly, but armed with canes and sticks. In the taverns, men met to talk in guarded voices. On every corner, the low muttering of the crowd could be heard.

From Murray's barracks on Brattle Street, a dozen soldiers came out, walking nonchalantly, but armed with clubs and cutlasses. Bystanders greeted them with catcalls and whistling. For a long time, the workmen and apprentices of Boston had been quarreling with the British soldiers. The town was full of rumors that tonight the trouble might come to a head.

As the evening wore on, more gangs appeared in the streets, and fighting broke out between the soldiers and the townspeople. An English captain making his way toward Murray's barracks found his path barred by a shouting, whacking, free-for-all battle. Some of the Bostonians had been wounded by cutlasses, and there was danger that further damage might be done. Quickly the captain ordered his men into barracks, had the gate shut, and made a promise that no soldiers would be let out for the rest of the evening. At that, some of the citizens urged everyone assembled in the street to go home peaceably. But the crowd hung about, yelling insults, and daring the soldiers to come out again. The officers restrained their men with difficulty. At length, seeing that the excitement here was over, someone in the mob suggested going to the main British guardhouse on



Boston in 1770. King Street runs from Long Wharf in the center of the picture. The Town House (shaded) is at the head of the street. The Custom House (shaded) is to the right and a little lower down.

King Street, in search of more soldiers.

At about this time, a boy came running through the town, crying, and complaining that the British sentry at the Custom House had hit him with the stock of his musket.

Suddenly the bell of the Old Brick Meeting House began to ring. In the frosty air and the dark, its deep, steady tolling sounded ominous and frightening.

Now more people appeared in the streets — some with buckets, for this was the bell that gave the alarm for fires. "Fire! Fire!" The words echoed through the town. But there seemed to be no fire — only the constant disturbance in the streets: the steady, threatening mutter; the muffled figures slipping through the dark, coming together for a moment, then breaking apart again.

For a few moments the town seemed fairly quiet except for the deep-toned ringing of the bell. But, about 9:15, the gang coming into King Street spied the lone sentinel standing watch in front of the hated Custom House.

"There's a soldier!"

"That's the soldier who hit the boy!"

"Knock him down! Kill him! Kill him!" The crowd was turning ugly.

Yelling and cursing and waving their sticks, the townspeople swept toward the sentinel. Alarmed, he backed up the steps of the Custom House and loaded his gun. Some of the boys in the throng circled in front of him, taunting him and pelting him with snowballs and huge chunks of ice until he cried out for help.

From the main guardhouse across the way, six British privates and a young corporal arrived on the double. They jostled their way through the crowd and halted in a half circle around the sentry box, holding their guns in front of them. The sentinel came down from the steps to join them. Almost immediately, Captain Thomas Preston, officer of the day, arrived to stand with his men.

A gang of sailors and rowdies led by a large mulatto man approached down Royal Exchange Lane, waving their weapons, large pieces of cordwood. They joined in the shouting. "Knock them down!" "Kill them!" By now, the crowd of citizens numbered fifty or sixty. Screaming and shoving and thrashing their sticks, they pressed in on the red-coated soldiers, swearing at them and challenging them to fire.

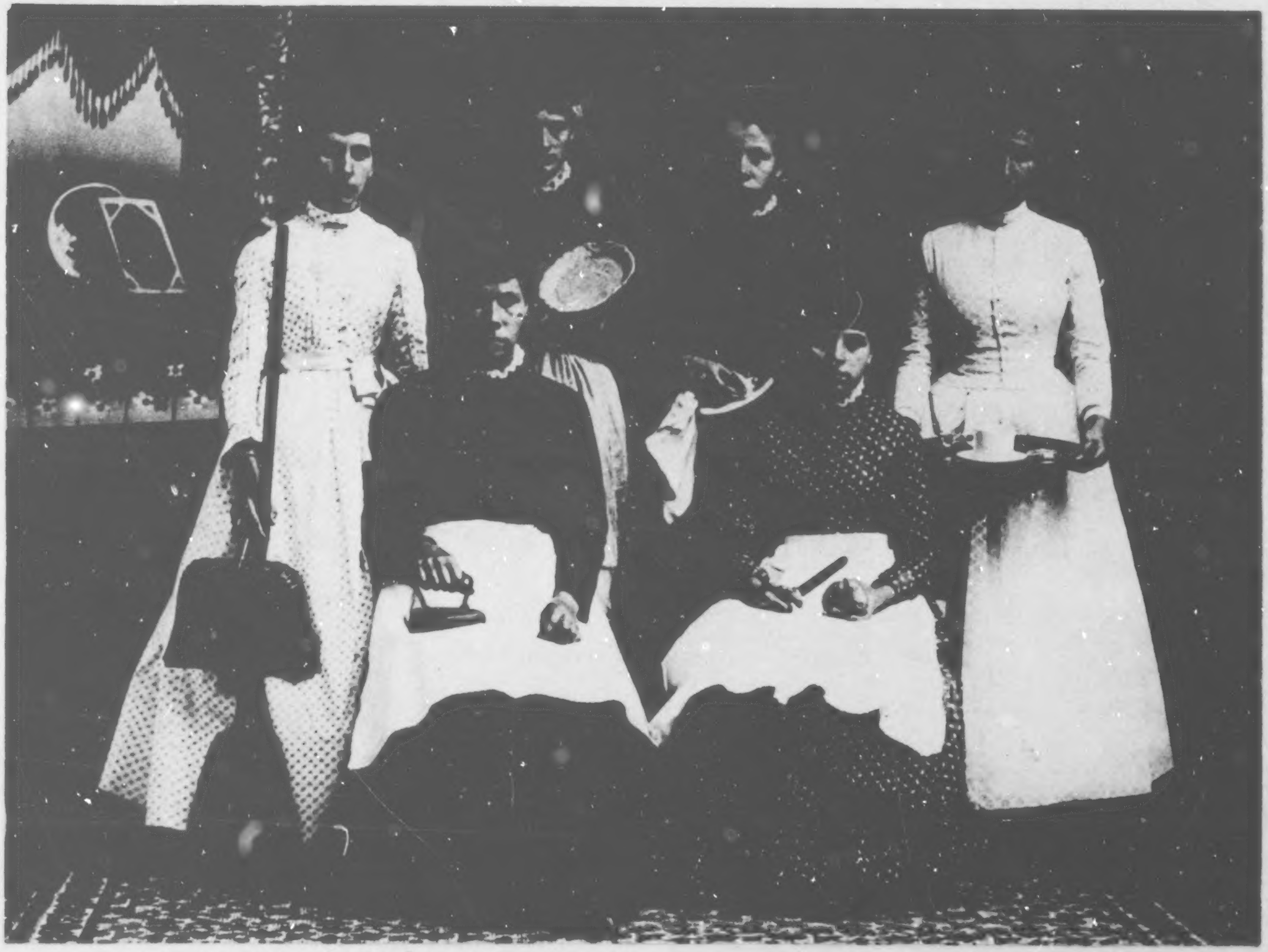
"You lobsters!" "You bloody-backs!" "Fire if you dare! Fire if you dare!"

Backed up against the Custom House, the British soldiers had no way of escaping their tormentors. They begged people to stand back, and tried to ward off the pushing, yelling crowd by pricking them with their bayonets, but it did little good. There was the sharp crack of wood on metal as the sticks of the assailants hit the British musket barrels.

A few townspeople approached to assure the soldiers that no harm would come to them, and a few tried to get the crowd to go home quietly. But things had gone too far. Suddenly, flame flashed from the British guns, and shots rang out. Five Bostonians fell, dead or mortally wounded. The crowd drew back in fright, then rushed forward again to help the injured. What had been a dangerous quarrel had in a moment flared into an ugly tragedy. For the first time, British soldiers had deliberately fired on American civilians and had killed them.

Now every bell in town was clanging wildly, and the British drums thundered in the night, beating the call to arms for the military garrison. More citizens thronged into the streets. From every direction they came running. The cry for vengeance echoed and re-echoed. "Massacre!" "Murder!" The words flashed through the crowd.

To this day, the affair is known as the Boston Massacre. Although the American Revolution was not to be fought for another five years, the colonists never forgot the Massacre or the British soldiers' part in it.



State Historical Society of Wisconsin

Photograph by Charles Van Schaick, Wisconsin, about 1905, illustrates variety of women's domestic tasks.

Worksheet 6

Oral History Interview Questions

Name of Person Interviewed ______________________________

Relationship to Interviewer ______________________________

1. In what year were you born?
   Where?
2. Who were the first members of your family to settle in this country?
   a. Where did they come from?
   b. Why did they move to this country?
   c. Where did they first settle?
3. What important memories do you have of your grandparents?
4. What is your mother's name?
5. What is your father's name?
6. What did your father and mother do for a living?
7. Did you have brothers and sisters?
8. How did you get along with them?
9. What activities were you involved in as a young girl?

   Were there things you didn't do because you were a girl?
10. Did you have to help out at home?

    What kinds of chores were you expected to do?
11. Tell me about your childhood neighborhood.
    a. In what city and state did you live?
    b. What racial, ethnic, and religious groups lived there?
    c. What did your neighborhood look like?
    d. How has it changed since you lived there?
12. What was your elementary school like?

    Did you enjoy school?

    What was your favorite subject?

13. How did you get to school?

    What was the most common type of transportation?

14. What did you want to be when you grew up?

15. What were your parents' expectations?

    a. Did they want you to go to college?
    b. Did they expect you to work outside the house?
    c. Did they want you to get married?

16. How much schooling did you receive?

17. Whom did you marry?

18. How many children did you have?

    How did having children affect your life?

19. Did you work?

    What were some of the jobs you had?

20. What was the happiest time of your life?

21. What was the worst time of your life?

22. What are your strengths?

    What are you proud of about yourself?

23. What values do you think are most important?

24. How have changes in male and female roles influenced your life?

25. If you had your life to live over again, would there be anything you would do differently?

NOTE: Some questions have been adapted from How to Tape Instant Oral Biographies by William Zimmerman (New York: Guarionex, 1981) and A Curriculum Guide to Women's Studies for the Middle School by Eileen Abrams (Old Westbury: The Feminist Press, 1981).

"Unfinished Sentences"[1]

Complete the unfinished sentences.

a. When I see a man cleaning the house, I ______________________________

____

b. I think a woman with young children who has a job outside her home ______

____

c. I think a man with young children who works outside his house _______

____

d. I think the phrase head of the house means __________________________

____

e. If I were a parent and my ten year old son asked to take ballet lessons ___

____

f. The major decisions in a family should be made by ____________________

____

g. If I were a parent and my twelve year old daughter told me that she wanted to be on the football team, I ______________________________

____

h. If a woman earns more money that her husband _________________________

____

---

[1] Myra Pollack Sadker and David Miller Sadker, Sex Equity Handbook for Schools (New York: Longman, 1982), pp. 210-214.

Values Voting[1]

How many of you:

Think that women should stay home and take care of the house and the children?

Think the husband should make more money than the wife?

Think that in a decision involving the family that the man should have the final word?

Think that it is all right for a boy to cry?

Think that it is all right for girls to cry?

Think that boys should play with dolls?

Think that it's all right for your father to stay home as homemaker if that's what he wants to do?

Think that it would be more fair if a wife shared the burden of earning money for the family along with her husband?

Have ever changed a baby's diaper?

Think that a woman will never truly be satisfied unless she has been a wife and a mother?

Think that a woman's place is in the home?

Think that fathers should come home earlier to spend more time with their children?

Have ever mended torn clothing?

Have ever cooked dinner?

How many of you:

Would think less of a man if you saw him knitting?

Think that men who have working wives should help around the house?

Think that a woman should take her husband's last name when they get married?

Plan on working outside the home after you finish school?

Think that men need to be liberated too?

Have ever wished that you had been born a member of the opposite sex?

Think that a man's main responsibility is to support his family?

Think that girls are more emotional than boys?

Jobs in the Home

List all the jobs that are done in your home.	What skills are needed to do that job?	Who does the job?	Why do you think the person does the job?	Ask the person why he or she does the job.

The New York Times

NEW YORK, MONDAY, FEBRUARY 10, 1919. TWENTY-FOUR PAGES

SUFFRAGISTS BURN WILSON IN EFFIGY; MANY LOCKED UP

Police Stop Demonstration Before White House on Eve of Amendment Vote.

VIOLENT SPEECHES MADE

President Denounced for Not Forcing Senate to Favor Votes for Women.

MRS. HAVEMEYER ARRESTED

She and Seven Other New York Women Among Those Refusing to Give Bail.

Special to the New York Times

WASHINGTON, Feb 9.-The militant National Woman's Party had a stormy time today, on the eve of the vote in the Senate on the woman suffrage amendment to the Constitution. President Wilson was burned in effigy in front of the White House, after a demonstration by women who charge that the President is to blame because he has not swayed the recalcitrant Senators to his will and thus assured victory for the cause. At least forty, and according to one report sixty-five, of the suffragists who participated were bundled into patrol wagons, and later, refusing to give bail, were sent to the house of Detention.

The leaders of the militants who were permitted to retain their liberty said late tonight that the police of the First Precinct had refused to tell how many women were held by them or to give out a list of the names. Those known to be in durance, however, include these from New York: Mrs. H. O. Havemeyer, who led the New York delegation; Miss Cora Weeks, Miss Wallerstein, Miss Louise Bryant, Miss Edith Alage, Miss Amy Jungling, Mrs. Palya Chevrier, and Miss Lucy Burns.

The scenes in front of the White House were exciting. An official militant description of the episode contained this paragraph:

"Through the smoke of the flames, from the stone rail of the White House fence and from the steps of the patrols in which they wre carried off, the women denounced the President, declaring him to blame for the threatened defeat of the suffrage amendment in the Senate tomorrow."

Effigy About Two Feet High.

The effigy of President Wilson, which lookod like a huge doll stuffed with straw and was slightly over two feet in height, was dropped into the flames by Miss Sue White of Nashville, Tenn., Chairman in that State of the National Woman's Party, assisted by Miss Gabriel Harris of Columbia, S.C., State Vice Chairman. There was a good deal of a mixup at the time, as the district police, the military police, and the Boy Scouts, who assisted in the roundup of the women, were getting busy, but, according to the official militant branch statement, Miss White made these remarks before she was pushed into the patrol wagon:

"We burn not the effigy of the President of a free people, but the leader of an autocratic party organization whose tyrannical power holds millions of women in political slavery. I have long been what is known as a Southern Democrat and the traditions of the democracy of Jefferson and Jackson are still strong in my heart: the stronger because I feel that it is what we are fighting for now."

"Mr. Wilson, as the leader of his party, has forgotten, or else he never knew, the spirit of true democracy. We feel that there is need of a determined protest of this sort; a protest which will shock Mr. Wilson and his followers into putting into action the principle that those who submit to authority shall have a voice in their government."

"Mrs. Havemeyer was standing arm in arm with a policeman. She was headed for the patrol wagon, but refused to go until she had said:

"Every Anglo-Saxon Government in the world has enfranchised its women in Russia, in Hungary, in Austria in Germany, itself, the women are completely enfranchised, and thirty-four are now sitting in the new Reichstag. We women of America are assembled here today to voice our deep indignation that, while such efforts are being made to establish democracy for Europe, American women are still deprived of a voice in their Government here at home."

Parade by 75 Suffragists.

This little uprising was preceded by a parade from headquarters in Jackson Place, in which, to quote the official statement, "seventy-five women, flaunting the purple, white and gold banners of the Woman's Party, marched, led by Miss Edith Ainge of Jamestown, N.Y., carrying the American flag and Miss Ella Riegel of Bryn Mawr, carrying the first suffrage banner. The urn of fire was carried by Miss Nell Mercer of Buell, Va., and Miss Elizabeth McShane of Uniontown, Penn."

"One of the banners bore this inscription: "The President is responsible for the betrayal of American women." Another: "He preaches democracy abroad and thwarts democracy here."

The vote will be taken in the Senate tomorrow afternoon upon motion of Senator Jones of New Mexico and the prospects are that the resolution will be defeated by a single vote.

Summary of an Article

Name: ______________________ Topic: ______________________________

1. List the following information about the article you read:

   Title of article ______________________________

   Author ______________________________

   Title of periodical ______________________________

   Volume __________ Page __________ Date ____________

2. What is the main idea of the article?

   ____

   ____

   ____

3. What are the most important points?

   ____

   ____

   ____

4. What are the supporting details?

   ____

   ____

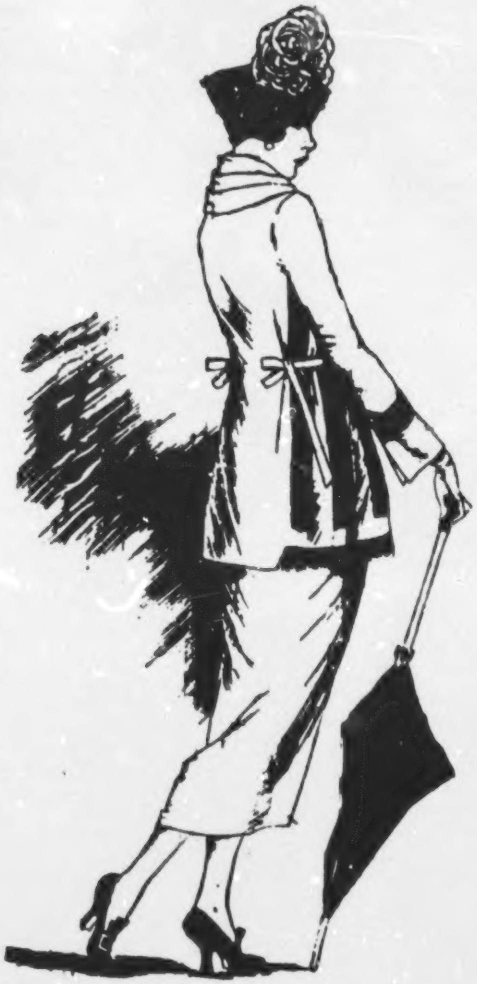
   ____

5. What is the author's opinion about the topic?

   ____

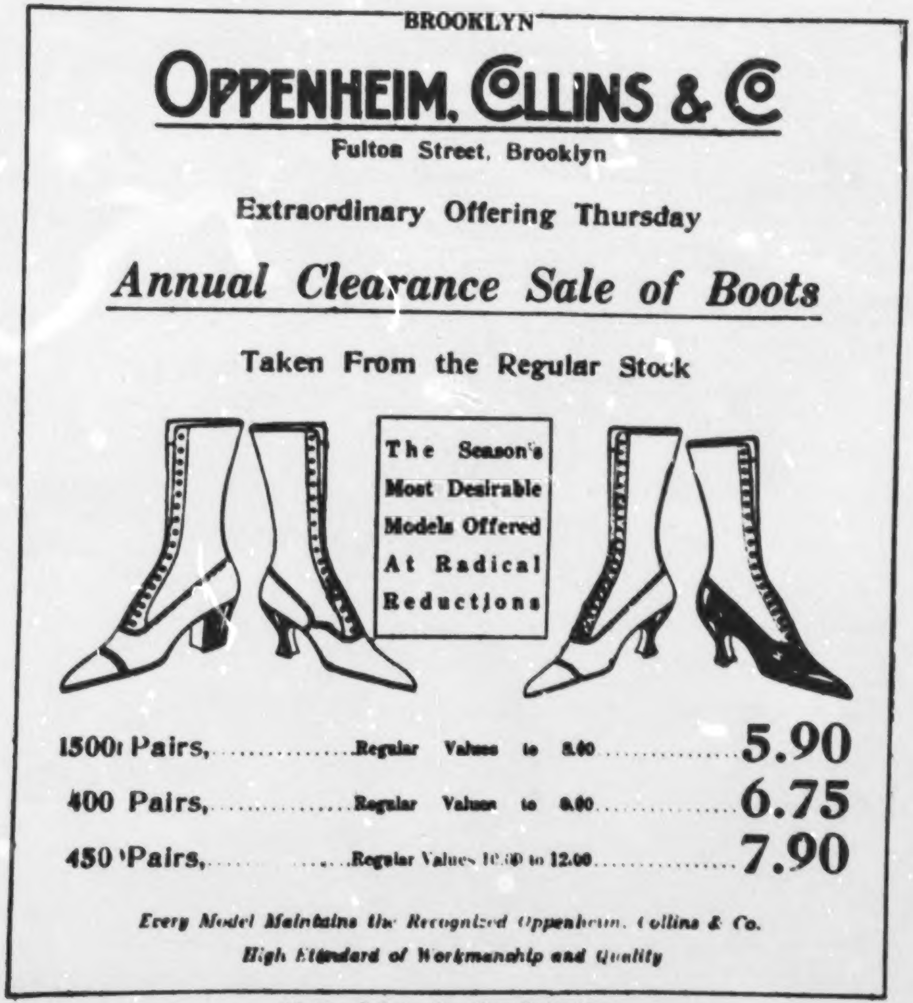
   ____

   ____



The silhouette of spring as Paris interprets it is shown in this Martial et Armand suit, worked out in fine dark blue serge. This finger-length box coat is striped in front and on the cuffs with rows of vertical tucks of blue taffeta set into the fabric, and the front is embellished with a little silken fringe. The skirt is short, narrow, and drawn up in the front.

The New York Times, February 10, 1919



BROOKLYN

OPPENHEIM, COLLINS & CO

Fulton Street, Brooklyn

Extraordinary Offering Thursday

Annual Clearance Sale of Boots

Taken From the Regular Stock

The Season's Most Desirable Models Offered At Radical Reductions

1500 Pairs, ... Regular Values to 8.00 .... 5.90

400 Pairs, ... Regular Values to 9.00 .... 6.75

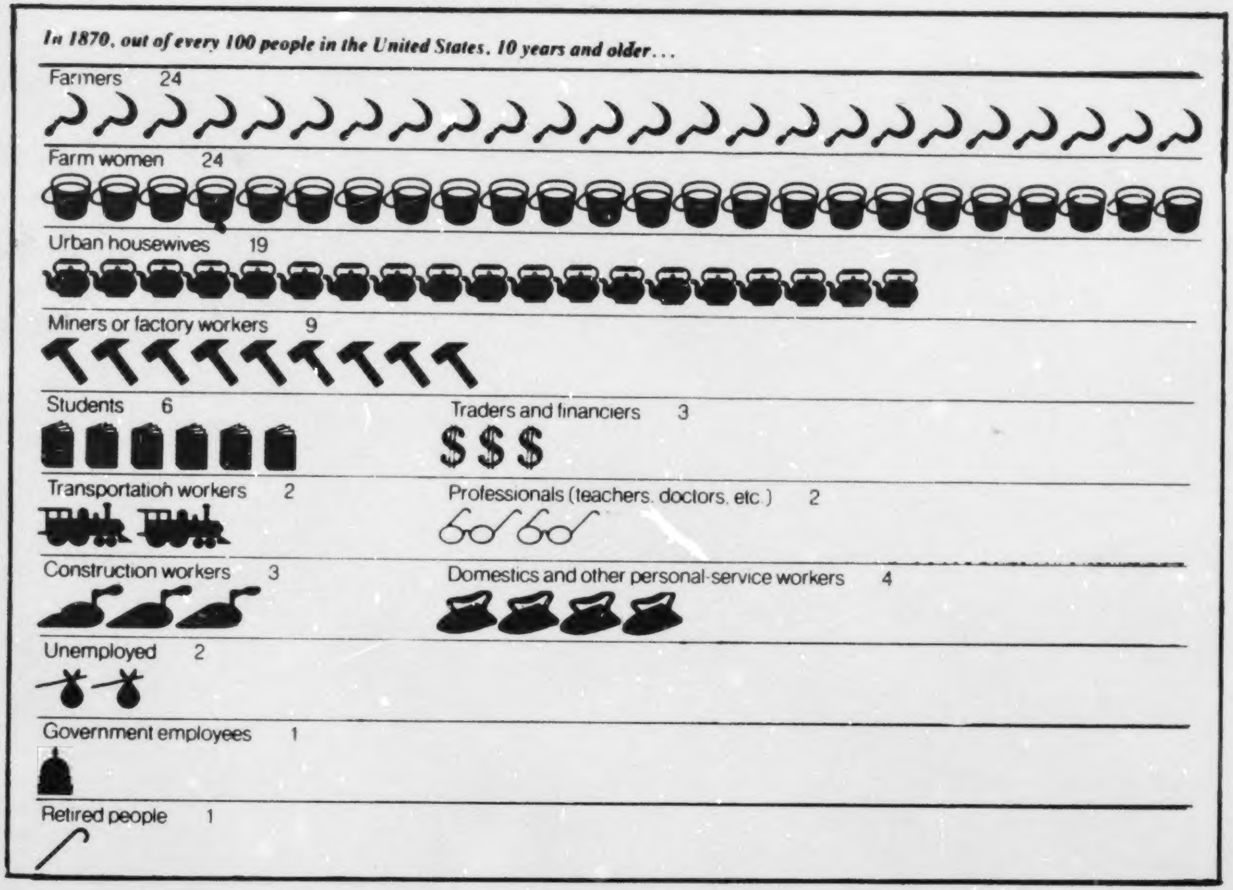
450 Pairs, ... Regular Values 10.00 to 12.00 .... 7.90

Every Model Maintains the Recognized Oppenheim, Collins & Co. High Standard of Workmanship and Quality

Also on Sale in Our New York Store

The New York Times, February 10, 1919

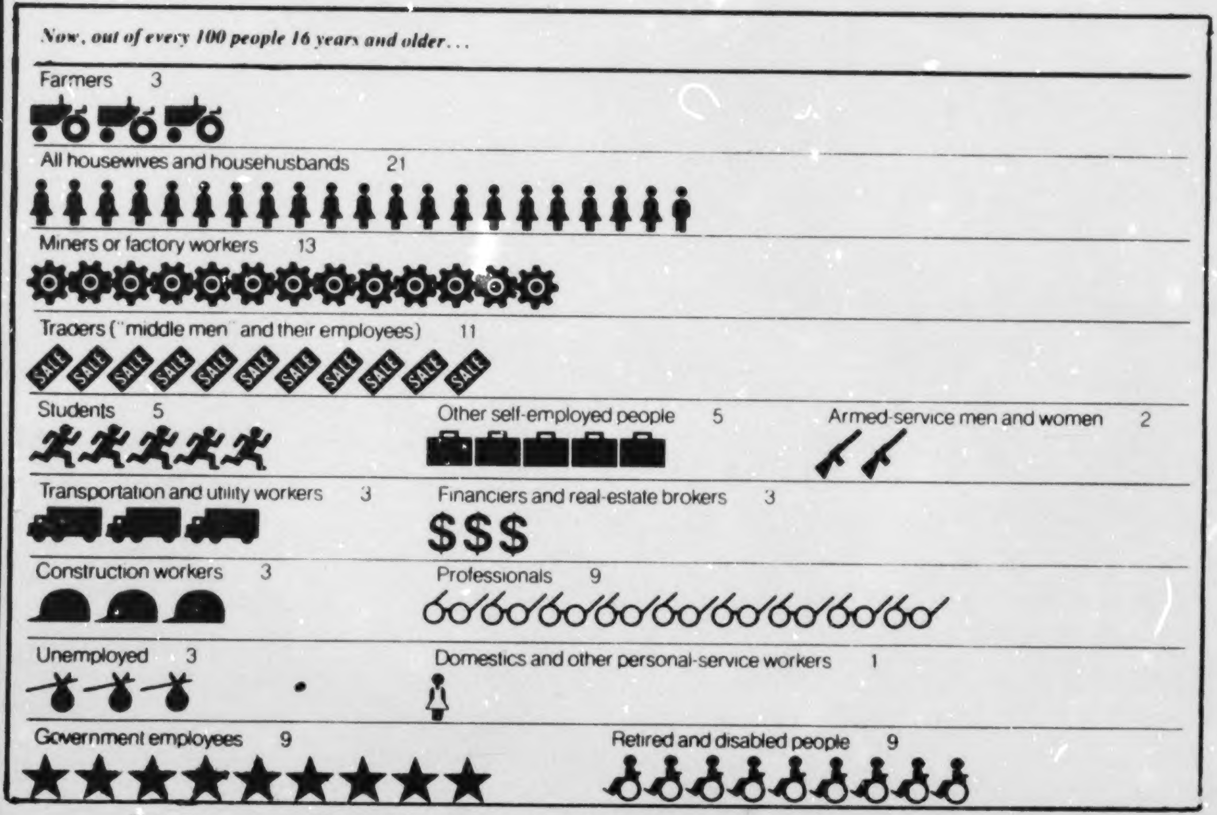
Occupations: What We Did



New York Times Magazine, July 4, 1976

Worksheet 14

Occupations: What We Do



Note: A century ago, 10-year-olds frequently entered the labor force; now the figure used by statisticians is 16.

New York Times Magazine, July 4, 1976

Independent Study Materials

Sample Task Card for Independent Study

You

How are you like a machine?

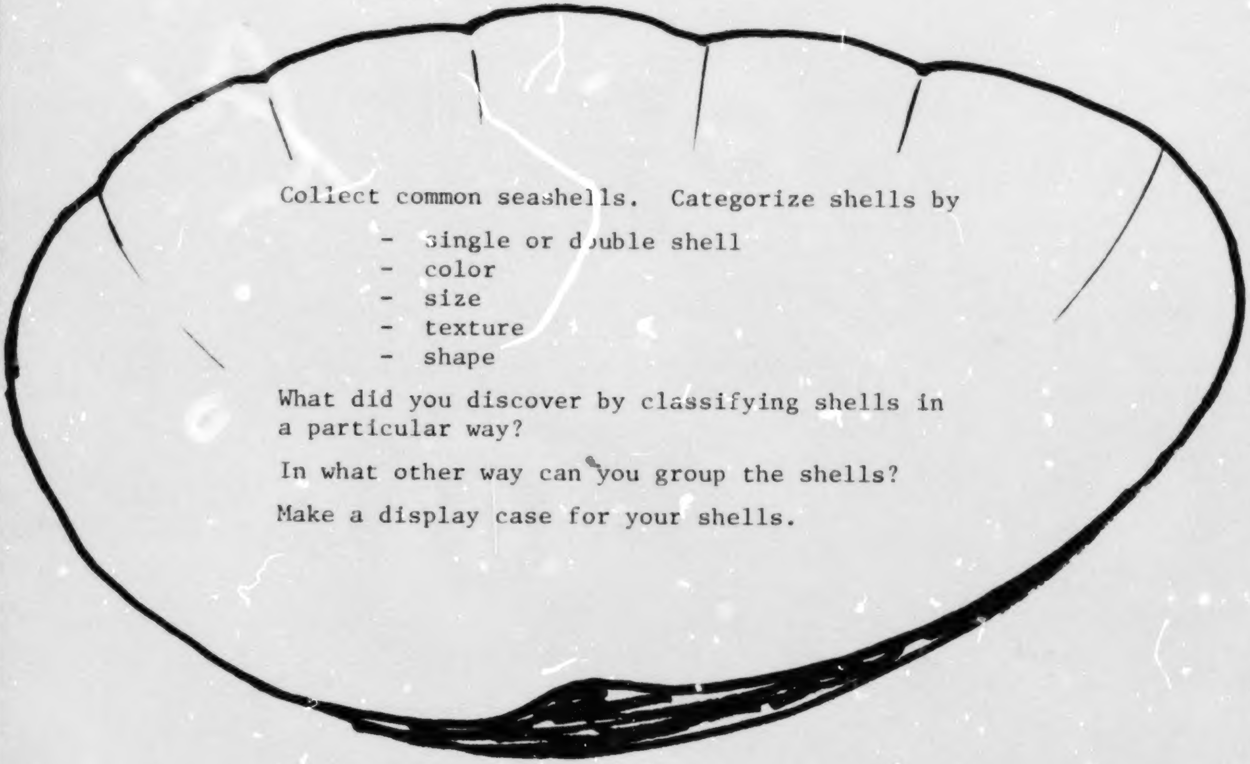
- You are made of many parts each with a special job to do.

How are you different from a machine?

Invent a machine to do a job you don't like to do.

Sample Task Card for Independent Study

Start a Collection: Shells



Collect common seashells. Categorize shells by

- single or double shell
- color
- size
- texture
- shape

What did you discover by classifying shells in a particular way?

In what other way can you group the shells?

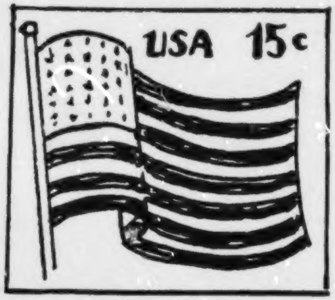
Make a display case for your shells.

Sample Task Card for Independent Study

Start a Collection: Stamps

1) Collect foreign or domestic stamps.

2) Use a large world map to match each stamp with its place of origin.



3) Group stamps by subject, color, or by country in an album.

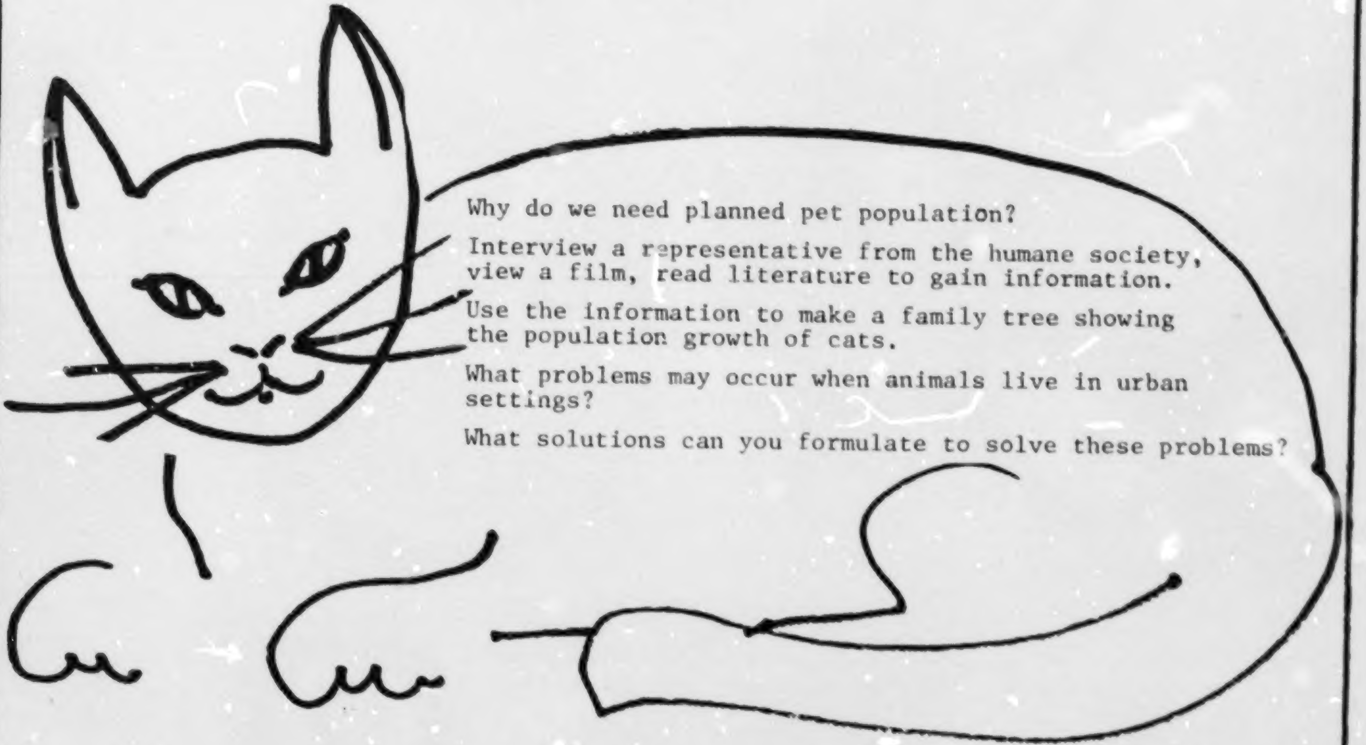
4) Specialize by collecting stamps with animals, flowers, sports pictures, famous works of art, or historical events.

5) Research the people and/or places depicted on the stamps.

6) Investigate symbolic respresentations on the stamps.

Sample Task Card for Independent Study

Pets



Why do we need planned pet population?

Interview a representative from the humane society, view a film, read literature to gain information.

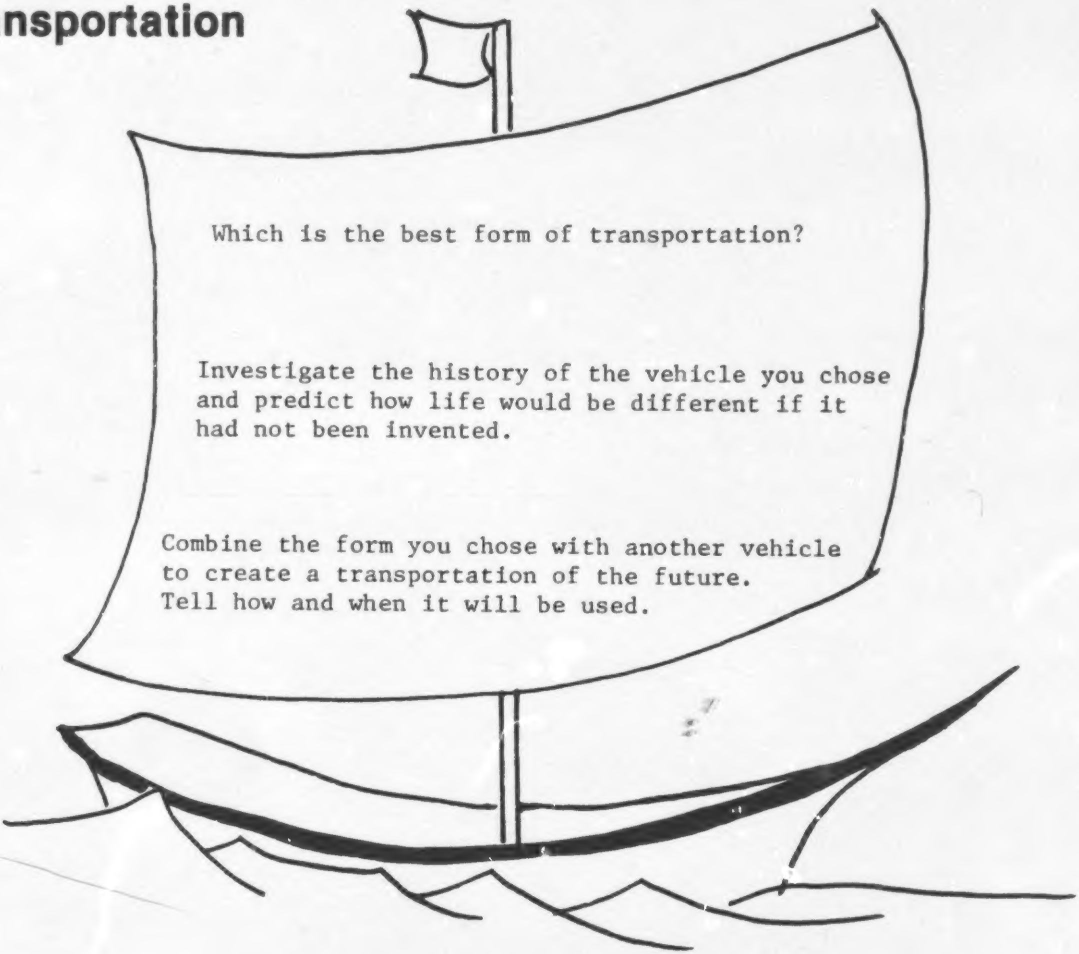
Use the information to make a family tree showing the population growth of cats.

What problems may occur when animals live in urban settings?

What solutions can you formulate to solve these problems?

Sample Task Card for Independent Study

Transportation



Which is the best form of transportation?

Investigate the history of the vehicle you chose and predict how life would be different if it had not been invented.

Combine the form you chose with another vehicle to create a transportation of the future. Tell how and when it will be used.

Appendix

In striving to understand the meaning of process detailed reference is made in two examples of models to help teachers analyze and develop curriculum:

A. One model is that of Bloom's Taxonomy of the Cognitive Domain. This model presents a hierarchy of learning which recognizes that different skills are required for different levels of thinking. This enables the teacher to advance students along a continuum of cognitive behavior. In their effort to develop a system of analyzing classroom activities in relation to cognitive behaviors, Bloom, Krathwohl, et al., developed a taxonomy of educational objectives that has provided a foundation for curriculum development since 1956. This practice has continued with programs for gifted and talented students with particular emphasis on the higher levels of cognitive behaviors. The six categories of the taxonomy represent the hierarchy of cognitive behaviors with each level incorporating all previous levels with the exception of evaluation which may occur at any level.

1. Knowledge. This category generally reflects recall of information. Verbs often used to describe student behavior reflecting knowledge are memorize, recall, state, identify, recognize, list, match, name.
2. Comprehension. In addition to knowledge of ideas, this category incorporates those behaviors which demonstrate understanding of material. Verbs often used to describe student behavior reflecting comprehension are paraphrase, translate, restate, summarize, illustrate, interpret, explain.

3. Application. As the title suggests, behaviors in this category demonstrate ability to apply understanding of concepts to other situations. For many students, especially the gifted, application may be a high-level behavior because a quality work will incorporate all other levels of the taxonomy. Verbs often used to describe student behavior reflecting application are apply, produce, compute, solve, relate, use, construct, prepare.
4. Analysis. Behaviors in this category involve the ability to break down and describe the components of an item and the relationships of those components to each other and to the whole. Verbs often used to describe student behavior reflecting analysis are analyze, discriminate, compare/contrast, distinguish, detail, classify.
5. Synthesis. This level of cognitive behavior requires ability to draw together ideas or materials from different sources to create something new. Verbs often used to describe student behavior reflecting synthesis are are produce, design, write, reorganize, create, generate, generalize.
6. Evaluation. Behaviors in this category involve judgements about value, purpose, or quality of an idea or item. Verbs often used to describe student behavior reflecting evaluation are judge, critize, assess, justify, appraise, rank, dispute.

Although instruction ideally should involve all students at each level of the taxonomy, in practice most class time is spent on acquisition of knowledge and demonstration of comprehension. Many educators suggest that for the gifted and talented a greater proportion of instructional time should be devoted to the higher levels of analysis, synthesis, and evaluation. This approach for gifted students, however, does not omit work at the knowledge and comprehension levels. *These students require basic skills and acquisition of knowledge and demonstration of comprehension [illegible] order to operate at the higher levels*. On the other [illegible], they should not spend so much class time on these skills as other pupils do since most gifted students are able to acquire knowledge and comprehend information quickly and independently.

B. A second model is that developed by Frank Williams and is referred to as "A Model for Implementing Cognitive-Affective Behavior in the Classroom (Thinking-Feeling)" This model shows the interrelationships between subject matter areas, teacher strategies and pupil behavior in four cognitive and four affective areas.

Pupil Behaviors

Cognitive

1. *Fluent Thinking*: To think of the most: generate a quantity flow of thought plus a number of relevant responses.
2. *Flexible Thinking*: To take different approaches: shift categories, and make detours in direction of thought.
3. *Original Thinking*: To think in novel or unique ways: stimulate unusual responses, clever ideas.
4. *Elaborative Thinking*: To add on to: embellish upon an idea, embroider upon a simple idea or response to make it more elegant, stretch or expand upon ideas.

Affective

1. Risk Taking: To have courage to: expose oneself to failure or criticism, take a guess, function under conditions devoid of structure, defend own ideas.
2. Complexity: To be challenged to: seek many alternatives, see gaps between how things are and how they could be, bring order out of chaos, delve into intricate problems or ideas.
3. Curiosity: To be willing to: be inquisitive and wonder, toy with an idea, be open to a puzzling situation, ponder the mystery of things, follow a particular hunch just to see what will happen.
4. Imagination: To have the power to: visualize and build mental images, dream about things that have never happened, feel intuitively, reach beyond sensual or real boundaries.

When developing a concept using any of the above models, the teacher is enriching the student's learning experiences and challenging cognitive and affective domains and not necessarily accelerating the student beyond grade level. This is possible because our teaching levels are generally geared to present information on a concept at the knowledge, comprehension and application levels of the thinking process. Thus by expanding the cognitive domain, the student is able to integrate new experiences by exercising higher levels of thinking.

Please note that there are other popular models for curriculum instruction which may be used:

- Guilford's Structure of the Intellect which is a three-dimensional cube model which assumes that there are a total of 120 possible cognitive abilities indicative that each ability is a combination of an operation or process, (cognition, memory, divergent production, convergent production, evaluation), a content (figural, symbolic, semantic, behavioral), and a product (units, classes, relations, systems, transformations implications).

- Renzulli's Enrichment Triad Model for curriculum development. The Enrichment Triad curriculum consists of three steps to provide enriched independent study. The model deals with exploring an interest, problem-solving and finally applying these skills to investigating real life problems.

References

Bloom, Benjamin and Krathwohl, David R. Taxonomy of Educational Objectives: Handbook 1: Affective Domain. New York: David McKay Co., 1974

Guilford, J.P. The Nature of Human Intelligence. New York: McGraw, 1967

Guilford, J.P. Ways Beyond the I.Q.: A Guide to Improving Intelligence and Creativity. Buffalo, New York: Creative Educ. Foundation Inc., 1979

Krathwohl, David R. et al. Taxonomy of Educational Objectives: Handbook 2: Affective Domain. New York: (McKay Publishers) Longman Inc., 1964

Meeker, Mary. Structure of Intellect: Its interpretation and Uses. Columbus, Ohio: Merrill, 1969

Renzulli, Joseph. The Enrichment Triad Model. Mansfield Center, Conn.: Creative Learning Press, Inc., 1977

Williams, Frank E. Classroom Ideas for Encouraging Thinking and Feeling. Buffalo, New York: D.O.K.,. Publishers, Inc., 1970

Williams, Frank E. A Total Creativity Program for Individualizing and Humanizing the Learning Process. Englewood, New Jersey: Educational Technology Publications, 1972

Bibliography

Davidson, Tom and Phyllis Fountain et al. The Learning Center Book. Santa Monica, California: Goodyear Publishing Co., 1976

DeRoche, Edward F. and Erika Gierl. Creative Units for the Elementary School Teacher. West Nyack, New York: Parker Publishing Co. Inc., 1969

Eberle, Robert F. Scamper Games for Imagination Development. Buffalo, New York: D.O.K. Publishers, Inc., 1971

Forte, Imogene and Joy Mackenzie. Kids' Stuff Series. Nashville, Tennessee: Incentive Publications, Inc.

Forte, Imogene and Joy Mackenzie. Nooks, Crannies and Corners. Nashville, Tennessee. Incentive Publications, Inc., 1972

Forte, Imogene. Pumpkins, Pinwheels and Peppermint Packages. Nashville, Tennessee: Incentive Publications, Inc., 1975

Freeman, Darlene and Stuart, Virginia. Resources for Gifted Children. New York: Trillium Press.

Gallagher, James. Teaching the Gifted Child. Boston, Massachusetts: Allyn & Bacon, Inc., 1964

Harnadek, Anita. Creative Thinking, Book I. Troy, Michigan: Midwest Publications Co., Inc., 1976

Kaplan, Sandra and JoAnn Butom Kaplan et al. Change for Children. Pacific Palisades, California: Goodyear Publishing Inc., 1973

Newmarr, Dara. The Teacher's Almanack. West Nyack, New York: Center for Applied Research in Education (Holidays)

Schaefer, Charles E. Developing Creativity In Children. Buffalo, New York: D.O.K. Publishers Inc., 1973

Stanish, Bob. Sunflowering, Thinking, Feeling, Doing Activities for Creative Expression. Carthage, Illinois: Good Apple Publication, 1979

Wasserman, Selma. Thinking For Yourself. Chicago, Illinois: Benefic Press, 1980

Waynant, Louise and Robert Wilson. Learning Center.......A Guide for Effective Us. Paoli, Pennsylvania: The Instructo Corp., 1974

Wermuth, Linda. Imagination and Language, Creative Writing Experiences In the Imaginative Use of Language. Englewood Cliffs, New Jersey: Prentice Hall Learning Systems Inc., 1976

Williams, Frank E. Classroom Ideas for Encouraging Thinking & Feeling. Buffalo, New York: D.O.K. Publishers, Inc., 1970

Wyman, Joe and Plum, Lorraine. Secrets and Surprises. Carthage, Illinois: Good Apple Inc., 1978

EVALUATION FORM FOR REACHING THE GIFTED

Please return by January 1, 1984 to:

Morris Freedman, Director
131 Livingston Street
Office of Curriculum Development and Support
Brooklyn, NY 11201

Name ____________________

School ____________________

Title or Position ____________________

1. Were the activities appropriate for the grade level indicated? If not, what changes would you recommend?
2. Were the activities expressed in sufficient detail to enable you to expand them appropriately?
3. Which subject area do you find most valuable?
4. What kinds of additions or revisions would you like to see in a new edition?
5. Have your students carried out responses to activities in this guide which you would like to describe?
6. Are there other models for teaching the gifted which you would like to see included?
7. Which activities were outstanding?
8. Which should be eliminated?
9. Was the material in the Appendix helpful? Why or why not?
10. Have you used lessons or activities which you feel would help other gifted programs? If so, please attach a sample of these activities to the evaluation form.

DETACH HERE